CONCEPTUAL STORM WATER POLLUTION PREVENTION PLAN

CALIFORNIA DEPARTMENT OF TRANSPORTATION

DISTRICT 04
TOLL BRIDGE PROGRAM
ENVIRONMENTAL ENGINEERING
BRANCH

AUGUST 2000

FORWARD

This Conceptual Storm Water Pollution Prevention Plan (CSWPPP) has been developed by the California Department of Transportation, Division of Toll Bridge Program, Environmental Engineering Branch. The purpose of this plan is to provide the contractor with guidance in preparing the contract Storm Water Pollution Prevention Plan (SWPPP) which will be submitted to the San Francisco Bay Regional Water Quality Control Board in compliance with the National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000003. This conceptual plan provides a detailed step-by-step procedure that the contractor shall follow in preparing the project SWPPP. The contractor's SWPPP shall consist of the following:

1) Title Page (an example of the title page is presented in the next page). Please see page one of the conceptual SWPPP for the relevant information that should be included in the title page.
2) A SWPPP Certification And Approval form should follow after the title page (a sample form is given after the title page).
3) A SWPPP Amendment Log should follow after the SWPPP Certification and Approval.
4) A SWPPP Construction Activity Schedule should follow after the SWPPP Amendment Log (a sample schedule is presented after the SWPPP Amendment Log).
5) Table of Contents
6) Introduction / Project Description
7) Reference Section
8) Body of SWPPP
9) Amendments
10) Additional Caltrans Requirements
11) Local Permit Requirements

The SWPPP must comply with Caltrans' Standard Specifications Section 7-1.01G-Water Pollution and, in accordance with the Contract SWPPP Special Provisions, the procedures and format set forth in this CSWPPP.

(*SWPPP title page*)

STORM WATER POLLUTION PREVENTION PLAN
FOR
(Name of the project including route, county, and post mile.)

Contract No. _ _ - _ _ _ _ _ _

Contractor:
(Include contractor's name, address, phone number and contact person.)

Resident Engineer:
(Include resident engineer's name, office address and phone number.)

Job Site Address:
(Include job site address.)

Person Responsible for Implementing and Maintaining the SWPPP:
(Include the name, address, and phone number.)

Preparation Date:

Revision Date (if any):

Prepared By:
(Include the name of the entity that has prepared the SWPPP if an outside consultant is used.)

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SECTION 100 Title Page and Contents

The contractor's Storm Water Pollution Prevention Plan (SWPPP) shall include a title page and table of contents.

Elements to be included in the title page shall be as follows:

- The name of the project. (Example: I-880/Fremont Cushing Parkway Interchange Reconstruction).
- The contract number for the project. (Example: 07-123454).
- Contractor's name, address, phone number, and contact person.
- Contractor's job site and address and phone number, if any.
- Name, address, and phone number of person responsible for implementing the SWPPP.
- The name of the entity that has prepared the SWPPP if an outside consultant is used.
- Date of preparation.

Elements to be included in the table of contents shall be as follows:

- The section numbers and name of the eight SWPPP sections (i.e. Section 100 Title Page and Contents, Section 200 Certification / Approval Page and Amendment Log, Section 300 Introduction / Project Description, Section 400 Reference Section, Section 500 Body of SWPPP, Section 600 Amendments, Section 700 Additional Caltrans Requirements and Section 800 Local Permit Requirements).
- The major subsection numbers and names together with their beginning page numbers (Example: Section 500.3 – Erosion and Sediment Controls, Page 500-6).

SECTION 200 Certification and Approval Page and Amendment Log

The contractor shall include a Certification and Approval page and Amendment Log within this section of the SWPPP.

The copy-ready SWPPP Certification and Approval form and Amendment Log in Appendices J and L may be used. If the SWPPP Certification and Approval form and Amendment Log in Appendices J and L are not used, then it shall be reproduced in a similar format and identical content.

No changes or exceptions to the certification statements will be permitted. The contractor's portion of the SWPPP Certification and Approval form shall be signed by the representative of the contractor taking responsibility for conditions of the statement prior to submittal of the SWPPP to the resident engineer for review and approval.

For each amendment to the SWPPP, the SWPPP Amendment Log shall include:

- The amendment number (Example: Amendment 1);
- The date of amendment approval (Example: 4/30/97);
- A brief description of the amendment (Example: Substitutes straw mulch for emulsions on all exposed slopes);
- Identify who prepared the amendment (Example: John Doe, Superintendent, ABC Construction).

The SWPPP Amendment Log shall be kept in Section 200 of the SWPPP immediately following the SWPPP Certification and Approval form. The details of the amendment, including the SWPPP Amendment Certification and Approval form, shall be included in Section 600 of the SWPPP.

SECTION 300 INTRODUCTION/PROJECT DESCRIPTION

The contractor shall provide an introduction that can be easily understood by a person who is not familiar with the project. The introduction shall include a narrative detailing the major features of the project and any attributes relating to adjacent water bodies (i.e., in or around a wetland, river, stream, or estuary). In addition, the contractor shall provide the following information:

Construction Limits:	Provide county, route, post mile, city, and street names.
Project Schedule:	Provide estimated construction start and finish dates.
Contractor:	Include contractor's name, address, and phone number here.
Resident Engineer:	Include resident engineer's name, address, and phone number here.

SECTION 400 REFERENCES

The contractor shall completely identify any documents that have been made a part of the Storm Water Pollution Prevention Plan (SWPPP) by reference to them. The contractor shall keep a copy of any reference documents with the SWPPP at the construction site. If the Regional Water Quality Control Board requests copies of the SWPPP to be provided for review, then copies of any reference documents shall likewise be provided.

For example: The I-880/Fremont Cushing Parkway Interchange Project consists of this document and the following:

- *Caltrans Storm Water Quality Handbooks-Construction Contractor's Guide and Specifications, dated April 1997.*
- *Model Water Pollution Control Program, Stage 1 WPCD-2 and Stage 2 WPCD-3, Holmes & Narver, 1998.*

The reference documents must be made available for review by any interested party during normal working hours at the following locations:

Toll Bridge Functional Support:	Toll Bridge Duty Senior 111 Grand Ave., 12th Floor Oakland, CA 94623-0660 (510) 286-5549
Resident Engineer's Office:	*Include contact information here.*
Contractor's Office:	*Include contact information here.*

SECTION 500 BODY OF SWPPP

500.1 PURPOSE AND OBJECTIVE

This section shall describe the purpose and objective of the SWPPP, and shall include the following statements:

- The purpose of this SWPPP is to :

  - Identify pollutant sources that may affect the quality of the discharges of storm water associated with the construction activities of the project.

  - Identify, construct, and implement storm water pollution control measures to reduce pollutants in storm water discharges from the construction site during construction and after construction.

- This SWPPP contains the required elements of Permit No. _____ issued by the _____.

  Note: Information on the applicable Permit number and issuing agency is specified in the Special Provisions.

- The preparation of this SWPPP is based on the principles of Best Management Practices (BMPs) and not numeric effluent limitations to control and abate the discharge of pollutants into receiving waters.

- The SWPPP will be amended whenever there is a change in construction or operations which may affect the discharge of significant quantities of pollutants into the receiving waters. The SWPPP will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges.

- The objectives of this SWPPP are: 1) to minimize the degradation of off-site receiving waters to the best extent possible with the current BMPs for the construction industry and 2) to reduce the mass loading of chemicals and suspended solids to the downstream drainage systems and the receiving water bodies.

It is imperative that the contractor comply with the requirements of the State Water Resources Control Board and the conditions of this SWPPP and make a “best faith effort” to comply with the NPDES regulations and SWPPP requirements. Caltrans staff shall enforce a strict compliance with the SWPPP and the contract documents.

500.2 SOURCE IDENTIFICATION AND POLLUTION CONTROL

500.2.1 Vicinity Map

The SWPPP shall include a map extending approximately 400-m (one-quarter mile) beyond the property boundaries of the construction site. The map shall show the following: the construction site, surface water bodies (including known springs and wetlands), known wells, an outline of offsite drainage areas that discharge into the construction site, general topography, and the anticipated discharge location(s) where the construction site's storm water discharges to a municipal storm water sewer system or other water body.

A U.S. Geological Survey (USGS) quad or other suitable base map may be used for showing the project site and a 400-m (one-quarter mile) extension beyond the property boundaries of the construction site. Although USGS maps display much of the required information, the map must be modified to show the above requirements. An example of a vicinity map is shown in Appendix A.

500.2.2 Water Pollution Control Drawings

This section of the SWPPP shall include an attached site map or maps, commonly called the Water Pollution Control Drawings (WPCDs) that depict the elements discussed in Section 500.2.2.1 to 500.2.2.12.

The WPCDs shall clearly show on-site drainage patterns and the location of soil stabilization and sediment control BMPs. The WPCDs shall not be smaller than the "reduced plans" (approximately 11" x 17") issued by Caltrans. The BMPs shall be identified on the WPCDs using the standard symbols for each BMP as presented in the *Caltrans Storm Water Quality Handbooks-Construction Contractor's Guide and Specifications*. Sample WPCDs are included in Appendix B. The WPCDs shall include:

- A cover sheet listing the BMPs that will be used, along with construction notes and/or a legend indicating the BMP symbols.
- Detail sheets showing construction details for the BMPs that will be used.
- Location sheets, usually modified layout, grading, stage construction and/or drainage sheets, showing the locations of BMPs that will be used.

500.2.2.1 Location of Control Practices Used During Construction

Location of control practices (i.e. soil stabilization and sediment control BMPs) that will be used during construction shall be delineated in the WPCDs and described within this section.

In addition, the contractor is required to include a WPCD of the construction staging area delineating such items but not limited to: 1) the storage areas, 2) sanitary facilities, and 3) waste management receptacles.

500.2.2.2 Areas Used to Store Soils, Materials and Waste

The contractor shall designate the locations for soil, materials and waste storage within their SWPPP. Furthermore, the contractor shall provide WPCDs depicting construction details for soil, material, and waste storage (i.e. chemical storage and soil temporary stockpile). Sites used for soil and waste storage shall be chosen in accordance with the relevant BMPs and will be approved by the resident engineer. The following criteria shall be considered for selecting storage areas:

Soil, waste and material storage areas should have measures for preventing water from entering the containment region. The contractor shall designate different storage bins or containers for separating various types of waste. Storage areas should be on paved surfaces so that ground water infiltration of spilled or leaking material is prevented. In addition, storage areas should be located away from the storm drain systems and watercourses. Soil storage areas shall have appropriate control measures for preventing the loss of sediments from the stockpiles. Place material storage areas near construction entrances to facilitate the availability of materials. Only watertight waste containers shall be used.

Hazardous waste should be separated from non-hazardous; dry hazardous waste should be separated from saturated hazardous waste. Hazardous construction materials and other toxic materials shall be stored in secondary containment.

Hazardous or contaminated soils shall be stockpiled in accordance with the contractor's workplan for handling and stockpiling excavated materials as required by the project Standard Special Provisions. All stockpiled materials shall be graded, covered, and protected from wind and water erosion.

500.2.2.3 Areas of Cut and Fill

Locations of cuts and fill shall be shown and identified on the WPCDs or referenced in narrative the appropriate layout, grading or other plans.

500.2.2.4 Drainage Patterns and Slopes Anticipated After Grading Activities

Drainage patterns and slopes that are anticipated after grading activities shall be shown and identified on the WPCDs or reference in narrative the appropriate layout, grading or other plans.

500.2.2.5 Areas of Soil Disturbance

Areas of soil disturbance shall be shown and identified on the WPCDs. A disturbed area is regarded as any location wherein soil is excavated, graded, cleared of vegetation, or impacted by the placement of vehicles, materials, or temporary facilities.

500.2.2.6 Surface Water Location

Describe in narrative and show and identify on the WPCDs on-site or nearby surface water locations. Surface water locations include oceans, lakes, rivers, streams, estuaries, ponds, springs, and wetlands. Surface water locations may be intermittent or seasonal and are typically shown on the project layout, grading, or drainage plans.

500.2.2.7 Areas of Potential Soil Erosion Where Control Practices Will Be Used During Construction

Describe in narrative and show and identify on the WPCDs areas of potential erosion. These areas include slopes, disturbed soil area, and unprotected drainage swales or other concentrated flow locations.

500.2.2.8 Existing and Planned Paved Areas and Buildings

Areas of concrete, asphalt, or other permanent coverage of the soils shall be shown and identified on the WPCDs, or reference in the narrative the appropriate layout, grading or other plans where such areas are shown.

500.2.2.9 Locations of Post-Construction Control Practices

Describe in narrative and show and identify on the WPCDs the post-construction storm water pollution control practices that are to be implemented. These control practices are usually shown on the project plans and specifications. Locations of post-construction BMPs will typically be provided to the contractor by the resident engineer.

500.2.2.10 Outline of the Drainage Area for Each On-Site Water Discharge Point

Describe the general drainage patterns and give reference to the drainage report prepared during the design of the project, if it is available. In addition, show and identify the outline of the drainage area for each on-site storm water discharge point.

500.2.2.11 Vehicle Storage and Service Areas

Describe the general procedure for storage and service of vehicles and the BMPs that will be employed to reduce pollutant discharge from these activities. Vehicle storage and service areas are to be designated by the contractor and shown on the WPCDs. Details for vehicle cleaning and washout locations are to be provided within the contractor's SWPPP. In determining the site locations for vehicle storage and service areas, the contractor should consider the following criteria:

- Minimize the risks associated with vehicle leaks impacting receiving waters.
- Contain vehicle waste within a specific area.
- Allow for easy cleanup or servicing of vehicles.
- Prevent runoff from passing through the area.

500.2.2.12 Areas of Existing Vegetation

Describe the extent, location, and nature of existing vegetation. Show on the WPCDs the existing vegetation or give reference to the appropriate layout, grading, landscape, or other plans.

Existing vegetation on the site that will be preserved shall be protected as much as practicable from mechanical or other injury while the project is being constructed. The Special Provisions often designate specific areas, which must be preserved and protected by isolation fencing. Any vegetation that does become disturbed during the project, which was not designated for clearing and grubbing, shall be replaced in-kind at the contractor's expense and liability.

500.2.2.13 Environmentally Sensitive Areas

Describe the extent, location, and nature of the environmentally sensitive areas (ESA). Show and identify on the WPCDs the ESA or give reference to the appropriate layout, landscape or other plans.

ESAs are often designated within the contract project plans and Special Provisions. Project related activities such as vehicle access, vehicle storage, storage of materials or any other related activities are prohibited to take place within the boundaries of an ESA. Temporary high visibility fences shall be built to ward off construction equipment and vehicles. The contractor shall provide the control practices to be implemented to minimize the inflow of sediments toward the ESA.

500.2.3 Narrative Descriptions

In the SWPPP, the contractor shall provide narrative description of the practices that will be implemented for each of the elements discussed in Sections 500.2.3.1 to 500.2.3.7.

500.2.3.1 Toxic Materials

All toxic materials known to have been treated, stored, disposed, spilled or leaked in significant quantities onto the construction site shall be described within this section of the SWPPP. In addition, the contractor shall list the anticipated toxic materials that will be used during construction.

Information to be presented within this section is often described in the Special Provisions. In addition, the soils/geotechnical report, project materials report or hazardous waste report prepared during the project design stage may reveal toxic materials that have been stored or disposed within the project limits. It is the responsibility of the contractor to thoroughly review the materials described above and to include the information in the SWPPP to alert construction personnel of the possibility of discovering existing toxic or hazardous waste.

The contractor shall handle the hazardous and toxic materials in accordance with the Standard Special Provisions along with the State, Federal and local requirements. Permits for

accomplishing disposal of hazardous and toxic wastes shall be acquired by the contractor. If contamination is suspected, the contractor shall notify the resident engineer for direction.

500.2.3.2 Practices to Minimize Contact of Construction Materials, Equipment, and Vehicles with Storm Water

Construction storm water management controls shall be utilized for minimizing the contact of storm water with pollutants. The various areas for establishing control practices include:

a) Construction Materials - Contact with storm water shall be minimized by following the guidelines in CD10(2) and CD11(2) of the *Caltrans Storm Water Quality Handbooks-Construction Contractor's Guide and Specifications* for material delivery, storage and use. A suggested detail for storage of chemicals is provided in the WPCDs in Appendix B. The contractor shall be expected to provide a method of storage similar to that shown in the detail. The contractor shall define specific commitments within their SWPPP. **Sole reliance on and merely referencing the BMP Fact Sheet of the Caltrans Storm Water Handbooks is inadequate and will not be allowed.**

   The contractor shall keep an accurate list and inventory list of materials delivered and stored on site. In addition, the contractor and all subcontractors shall provide a copy of the "Hazardous Substance Communication Program and Material Safety Data Sheets" and incorporate them as appendices within the SWPPP.

b) Construction Equipment and Vehicles - During the storage of construction equipment and vehicles, the contractor shall utilize runoff controls to ensure minimal contact of storm waters with construction equipment and vehicles. Cleaning and maintenance of areas for the contractor's equipment shall be allowed only in locations as directed by the resident engineer. These areas shall also be located away from storm drains, drainage structures and watercourses. Cleaning and maintenance waste shall be cleared and/or removed as described herein and in accordance with applicable laws. **Sole reliance on and merely referencing the BMP Fact Sheet of the Caltrans Storm Water Handbooks is inadequate and will not be allowed.**

c) Accidental Discharges - Accidental discharges can be the greatest threat to the pollution of storm water discharges. Prevention measures shall be implemented so as to minimize the risk of accidental discharge. The contractor shall provide a spill contingency program in Section 500.4.1.9 of the SWPPP.

   The contractor shall define control measures such as secondary containment and spill control materials within their SWPPP. **Sole reliance on and merely referencing the BMP Fact Sheet of the Caltrans Storm Water Handbooks is inadequate and will not be allowed.**

500.2.3.3 Construction Material Loading, Unloading, and Access Areas

This information shall be designated and fully described by the contractor in the SWPPP. Minimizing the amount of soil disturbance is of primary importance for considering access areas. The contractor shall define and describe the measures, both physical and procedural, to be

implemented for minimizing storm water impacts associated with activities of loading and unloading materials. **Sole reliance on and merely referencing the BMP Fact Sheet of the Caltrans Storm Water Handbooks is inadequate and will not be allowed.** Materials will be loaded and unloaded in the construction staging area designated by the contractor and approved by the resident engineer. General practices and the locations of material loading and unloading for preventing and reducing storm water pollution are outlined in the Material Delivery Practices, CD10(2) of the *Caltrans Storm Water Quality Handbooks-Construction Contractor's Guide and Specifications*. Access to the construction site shall be provided by stabilized construction entrances/exits and stabilized construction roadway. Guidelines for Stabilized Construction Entrances are included in CD29A(2) and CD29B(2), contained in the *Caltrans Storm Water Quality Handbooks-Construction Contractor's Guide and Specifications*. Any materials with potential to contaminate storm water shall be protected from the rain, either with a temporary covering or plastic, and shall be stored in secondary containment. These materials should be stored on higher ground, away from drainage systems and surface water.

500.2.3.4 Pre-Construction Control Practices

Describe pre-construction practices (if any) to reduce sediment and other pollutants in storm water discharges from the project site. The SWPPP shall note any existing permanent control measures (e.g., sediment basins, oil / water separators, etc.) within the vicinity of the project that may be used for the removal of pollutants discharged from the construction site. Descriptions of these existing permanent control measures will typically be provided by the resident engineer. If there are no existing permanent control measures, the SWPPP shall state as such.

500.2.3.5 Equipment Storage, Cleaning, and Maintenance Areas

Construction equipment and vehicles shall be stored at locations to be approved by the resident engineer. Contractor shall describe the practices that will be used for cleaning and maintaining such areas. Vehicle cleaning and washout locations shall be designated by the contractor and included in the WPCDs. The contractor shall utilize runoff control to ensure minimal contact of storm waters with construction equipment. Construction equipment and vehicles may be fueled and maintained on-site at locations in accordance with CD18(2), CD19(2), and CD20(2) of the *Caltrans Storm Water Quality Handbooks-Construction Contractor's Guide and Specifications*, and must be defined in the narrative section of the contractor's SWPPP and approved by the resident engineer. **Sole reliance on and merely referencing the BMP Fact Sheet of the Caltrans Storm Water Handbooks is inadequate and will not be allowed.**

500.2.3.6 Methods of On-Site Storage and Disposal of Construction Materials

All construction materials should be stored and disposed in a manner that prevents or reduces the discharge of pollutants to storm water by minimizing the storage of hazardous materials on-site, storing materials in a designated area, installing secondary containment, and conducting regular inspections. The narrative portion of this section should describe the method of storage and disposal of construction materials that are consistent with avoiding the consideration of the risks associated with storm water pollution, injury to workers or visitors, ground water pollution, and soil contamination.

Disposal of construction materials shall be performed in accordance with local, State and Federal regulations, and the Special Provisions. Applicable BMPs concerning on-site storage and disposal include CD10(2) Material Delivery and Storage, CD13(2) Solid Waste Management, CD14(2) Hazardous Waste Management, CD16(2) Concrete Waste Management, CD17(2) Sanitary/Septic Waste Management, and CD46(2) Liquid Waste Management. Hazardous materials shall be stored on-site for no longer than 90 days. The contractor shall review the BMPs and applicable contract provisions in order to define appropriate practices for their activities within their SWPPP. **Sole reliance on and merely referencing the BMP Fact Sheet of the Caltrans Storm Water Handbooks is inadequate and will not be allowed.**

500.2.3.7 The Nature of Fill Material and Existing Data Describing the Soil

The contractor shall describe the conditions of the fill material and the soil at the construction site. A general description can usually be found in the project materials report or geotechnical report. In addition, information regarding contaminated or hazardous material shall be described in this section and references shall be made to any applicable sections of the plans and Special Provisions covering soils conditions.

500.2.4 Pollutants Likely to be Present in Storm Water Discharges

The potential source of pollutants from the construction activity typically results from the contractor's operation of equipment, stockpiling of materials, and grading activities. The contractor will be required to list the potential site pollutants to be used and shall submit a list of the potential site pollutants to be used and shall provide a list of additional controls for these materials within their SWPPP. Good housekeeping practices and BMPs shall be used to reduce the listed pollutants. Also, reference may be made to the potential pollutants listed under section 500.2.3.1, Toxic Materials.

Although significant quantities of pollutants, other than sediment, may not be expected to be present in storm water discharges from the construction site, a list of pollutants that are likely to be present in storm water runoff in very small quantities and the control measure that will be used to reduce such pollutants shall be provided.

An example table that lists the construction site pollutants is provided below.

Table 1 – List of Construction Site Pollutants

Category	Product	Pollutants	BMPs
Adhesives	Adhesives, glues	Phenolics, formaldehydes	Material controls
	Resins, epoxy	Phenolics, formaldehydes	Material storage
	Calks, sealers, etc.	Asbestos, phemolics, forma.	Material delivery
	Coal tars	Benzene, phenols, napthalene	
Cleaners	Polishes	Metals	Material controls
	Etching Agents	Metals	Material storage
	Ammonia, lye, soda	Acidity / Alkalinity	Material delivery
	Bleaching agents	Acidity / Alkalinity	
	Chromate Salts	Chrominum	
Drainage	Solder	Lead, copper, zinc, tin	Material controls
	Pipe fitting	Copper	Material storage
	Galvanized metal	Zinc	Material delivery
	Electric wiring	Copper, lead	
Wood	Sawdust	BOD	Material controls
	Particle	Formaldehyde	Material storage
	Treated woods	Copper, creosote	Material delivery
Concrete	Dusts	Acidity, sediments	Concrete Waste
	Pigments	Metals	Management
	Curing compounds		
	Glazing	Asbestos	
	Cleaning	Acidity	
Yard	Vehicle Maintenance	Oil, grease, coolants	Equipment fueling
Operations	Gasoline, oils, add.	Benzene, oil, grease & derivative	Equipment maint.
	Marking paints	Vinyl, chloride, metals	Equipment cleaning
	Grading	Erosion, sediments	Material controls
	Portable Toilets	BOD, disinfectants	Material delivery
	Fire hazard	Sodium, arsenite, dinitro	Material storage
	Health and safety	Rodenticides, insecticides	
	Wash Waters	Herbicides, oil, grease	
Material	Waste storage	Spills, leaks, discharge	Hazardous Waste
Storage	Hazardous waste	Spills, leaks, discharge	Management
	Raw material piles	Dust, sediments, discharge	Material controls
			Material delivery
			Material storage
Dewatering	Stockpile De-watering	Sediment, turbidity effluents,	Non-Storm Section
	Pile De-watering	Toxic pollutants	

500.2.5 Construction Site Estimate

The contractor shall provide the following information:

- An estimate of the construction site area in hectares (acres),
- An estimate of the runoff coefficient of the construction site before and after construction, and
- An estimate of the impervious area of the construction site, in percent, both before and after construction.

The resident engineer typically will provide to the contractor the site area, runoff coefficients, and percent impervious area. If the resident engineer does not provide this information, the contractor shall develop it. The contractor shall use the form provided in Appendix C to develop the necessary information for runoff coefficients.

500.2.6 Notice of Construction

The contractor shall incorporate a copy of the Notice of Construction in the SWPPP. The Notice of Construction will be provided by the resident engineer during the pre-construction meeting. A sample of Notice of Construction is presented in Appendix D.

500.3 EROSION AND SEDIMENT CONTROLS

The contractor shall incorporate in the SWPPP the applicable minimum BMPs set forth in the Special Provisions as "Minimum Requirements". In addition, the contractor shall consider for incorporation into the SWPPP all other BMPs identified within the BMP Consideration Checklist provided as Appendix M. Using the BMP Consideration Checklist, the contractor shall document that all of the appropriate BMPs have been considered. For BMPs that will not be incorporated into the SWPPP, the contractor shall include a brief statement on the BMP Checklist describing the reason for their exclusion. BMPs that will be used shall be shown on the WPCDs and described in the following sections of the SWPPP. The WPCDs and BMP descriptions shall include where the practices will take place and when they will be implemented.

500.3.1 Soil Stabilization Practices

Soil stabilization BMPs shall be used to preserve existing vegetation where feasible and to re-vegetate open areas as soon as feasible after grading or construction. Soil stabilization BMPs shall be considered for both active construction areas and non-active soil-disturbed areas of the project site. The objective of soil stabilization is to prevent erosion of disturbed soils on the construction site.

500.3.2 Sediment Control Practices

b) There are three required methods of sediment control practices that must be implemented by the contractor to control excessive sediment water pollution: 1) Perimeter Control – divert water around the area of impact (using ditches, berms, or other barriers; 2) Source Control – reduce impact of rainfall directly onto site (using mulch, plastic cover, geotextiles, mats, etc.); and 3) Elimination – filter or detain sediment conveyed in storm water run-off using silt fences, inlet protection, straw bale barriers, etc.

The contractor is not limited to the above practices. Selected BMPs to prevent a net increase in sediment load in storm water discharges from the project site shall be shown and identified on the WPCDs and described within this section of the SWPPP.

500.3.3 Sediment Tracking Controls

Sediment tracking control BMPs shall be considered for all points of ingress and egress to the project site where vehicles and / or equipment may track sediment from the construction site. The objective of sediment tracking control BMPs is to prevent sediment tracking onto public and private roads. All sediment tracking control measures are to be shown and identified on the WPCDs and described in this section.

500.3.4 Wind Erosion Controls

Wind erosion control BMPs shall be considered on all disturbed soils on the project site that are subject to wind erosion, and when significant wind and dry conditions are anticipated during construction of the project. The objective of wind erosion control is to prevent the transport of sediment from soil-disturbed areas of the project site offsite by wind.

All soil, which has been disturbed, will be sprayed with water during and after construction operations to prevent dust from becoming airborne in accordance with local dust control ordinances. In general, dust control will be applied in order to prevent dust from becoming visible to the human eye. Care shall be taken to sprinkle additional areas of exposed soil as necessary during windy periods. Water is to be used as a palliative, such that soil is wet; no runoff and erosion shall result from this practice.

500.4 NON-STORM WATER MANAGEMENT AND WASTE MANAGEMENT AND DISPOSAL

The objective of non-storm water management and waste management and disposal BMPs is to reduce the discharge of materials other than storm water to the storm drain system or to receiving waters.

The contractor shall incorporate in the SWPPP the applicable minimum BMPs set forth in the Special Provisions as “Minimum Requirements”. In addition, the contractor shall consider for incorporation into the SWPPP all other BMPs identified within the BMP Consideration Checklist

provided as Appendix M. Using the BMP Consideration Checklist, the contractor shall document that all of the appropriate BMPs have been considered. For BMPs that will not be incorporated into the SWPPP, the contractor shall include a brief statement on the BMP Checklist describing the reason for their exclusion. BMPs that will be used shall be shown and identified on the WPCDs and described in the following sections of the SWPPP. The WPCDs and BMP descriptions shall include where the practices will take place and when they will be implemented.

500.4.1 Non-Storm Water Management

Various discharges are anticipated at the site; however, the controls and impacts associated with each discharge may or may not be entirely known. The contractor shall be responsible to identify all discharges in their SWPPP and comply with all restrictions set forth in the Non-Storm Water section of the Special Provisions. In addition, the contractor shall provide the following information on each discharge:

a) Quantity/Quality of discharge;
b) Location of discharge;
c) Frequency of discharge;
d) Management practices (procedure) associated with the discharge;
e) Control measures (treatment) associated with the discharge;
f) Inspection and monitoring of discharge.

Generally, the discharges described below are known to be associated with construction. The contractor is responsible for identifying the discharges at their job site and shall elaborate upon each discharge.

1) Pile Dewater

The contractor shall graphically describe the dewatering apparatus and process within the SWPPP. The graphic shall show both a sectional and plan view that details the removal techniques for suspended solids. In addition, the graphic shall define the flow path and placement of pipes, hoses, pumps, and other equipment used to convey the discharge. Furthermore, the contractor shall provide a sketch that depicts the general position of the apparatus relative to the pile(s) undergoing dewatering and point of effluent discharge. See Section 500.10.2 Discharge Monitoring for inspection protocols.

2) Stockpile Dewater

Methods and measures to prevent the flow of water, including ground water and surface runoff from entering any temporary stockpiles on land shall be included in the SWPPP. Inspection protocols defined in Section 500.10.2 shall be considered.

3) Excavation Dewater

The contractor shall provide a plan which details the methods and measures that will be used to seal the sides and bottom of excavations, prevent the flow of water into excavations, control seepage within the specified maximum seepage rate, and remove known ground water contaminants. The plan shall contain a graphic for the dewatering operation showing both a sectional and plan view that details the removal techniques for suspended solids and know ground contaminants. The graphic shall define the flow path and placement of pipes, hoses, pumps, and other equipment used to convey the discharge. In addition, the contractor shall provide a drawing that depicts the general position of the dewatering measures relative to the excavations undergoing dewatering and the point of effluent discharge.

4) Liquids, Residues and Debris

Within the SWPPP, the contractor shall depict and describe the procedural and structural methods of detaining, collecting, and disposing of all liquids, residues, slurries, and debris associated with the construction operations. The objective of these methods is to prevent liquids, residues, slurries and debris from becoming present in the storm drainage systems, or other water bodies.

5) Vehicle and Equipment Washing

Soil along with grease, oil and other contaminants are likely to be carried by vehicles and other equipment used in the construction site. When washing cannot be done off-site within a structure equipped with sanitary sewer facilities, a cleaning area shall be designated at the construction site taking care not to discharge the wash water into drainage inlets and watercourses. The place shall be stabilized with an aggregate base and bermed to contain the wash water. Disposal of wash water will be approved by the resident engineer.

6) Vehicle and Equipment Fueling and Maintenance

Non-storm water discharges due to fueling of construction vehicles at the site shall be minimized. The following practices shall be used:

- A stockpile of spill cleanup materials shall be readily accessible, including absorbent materials; drip pans, and booms for spills in water.

- The contractor shall avoid mobile fueling of construction equipment around the site; rather transport the equipment to designated fueling areas.

7) Dust Control Water

The rate of application of water for dust control shall be conducted in a manner that will not produce excess water surface runoff into storm drain systems and the Bay, generate runoff and cause erosion. Dust control water shall be used only as a palliative to wet dust without conveyance. Water for dust control use may be either potable or non-potable. Non-potable

water used by the contractor must meet the California Department of Health Services water reclamation criteria, the State Water Resources Control Board requirements and comply with the Standard Specifications Section 17.

8) Illicit Discharges

The construction site shall be inspected at the beginning of the project for any evidence of illicit discharges. Thereafter, regular inspections for the same purpose shall be carried out and any evidence shall be reported immediately to the resident engineer. Illicit discharges include motor oil and paint, unlabeled materials in containers, continuous run-on from adjacent property, and abnormal water flow during the dry weather season. Although the contractor is not responsible for the investigation and clean up of illicit discharges not generated by him, the resident engineer may direct him to clean up non-hazardous discharged material on the construction site.

Caltrans will not allow illicit discharges generated by the contractor's operation. Illegal dumping within the project site shall be immediately reported to the resident engineer, NPDES Coordinator, California Highway Patrol or other appropriate authority. Furthermore, the resident engineer and the NPDES Coordinator (510-286-5664) shall be notified immediately of illegal dumping.

9) Accidental Discharges (i.e. Spill Contingency)

A continuing program shall be established to educate employees and subcontractors on the prevention of and prompt action for accidental discharges on site. Depending on the magnitude and nature of the discharge, containment and cleanup of the spill shall be immediate and automatic. The contractor shall emphasize to his/her staff and subcontractors that accidental discharges can be a great threat to storm water quality. The contractor shall describe within their SWPPP the equipment and spill control materials that will be readily available for cleanup and containment of potential spills onto site soils and water bodies. Handling of all emergency spill controls and measures shall be performed as follows:

A. Minor Spills

Minor spills typically involve small quantities of oil, gasoline, or paint that can be controlled by the first responder at the discovery of the spill. For minor spill clean up, an adequate supply of absorbent cleaning materials shall be available on-site.
The following practices will be used for minor spills:

1. Contain the Spill

- Stop the source of the spill.
- Berm around the spill if necessary.
- Use absorbent materials to prevent spreading of spill area.

2. **Recover Spilled Materials**

- Sweep up spilled dry materials immediately. Do not wash or bury spilled materials.
- Recover liquid spills on dirt areas by digging up and properly disposing of contaminated soil.
- Recover liquid spills on paved or impermeable surfaces using "dry" cleanup methods (absorbent materials, cat litter, and /or rags).

3. **Clean the Contaminated Area and/or Dispose of Contaminated Materials**

- Send used cleanup rags to a certified industrial laundry or dry cleaner, or disposed of properly.
- Dispose contaminated materials in a proper waste container.
- Do not dispose toxic liquid waste and chemicals in dumpsters designated for construction materials.
- Place small non-hazardous spill residues and materials inside a sealed container and disposed of properly.
- Examine labels for proper waste disposal instructions.
- Inspect the spill area periodically until it can be satisfactorily known that the spill material has been completely removed from the site.

B. Semi-Significant Spills

Semi-significant spills can be controlled by the first responder with the assistance of other personnel such as laborers, foremen, Caltrans personnel, etc. This response may require the cessation of all other construction activities.

The following spill control practices, consistent with those for minor spills, will be used upon discovery of a semi-significant spill:

1. **Notify the resident engineer immediately.**

2. **Contain the Spill**

- Stop the source of the spill.
- If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike.
- If the spill occurs on a paved or impermeable surface, encircle the spill with absorbent materials to prevent the spill from spreading widely.
- If the spill occurs during rain, cover the spill if possible.

3. **Recover Spilled Materials**

- Sweep up spilled dry materials immediately. Do not wash or bury spilled materials.

- Recover liquid spills on dirt areas by digging up and properly disposing of contaminated soil.
- Recover liquid spills on paved or impermeable surfaces using "dry" cleanup methods (absorbent materials, cat litter, and /or rags).

4. Clean the Contaminated Area and/or Dispose of Contaminated Materials

- Send used cleanup rags to a certified industrial laundry or dry cleaner, or disposed of properly.
- Dispose contaminated materials of in a proper waste container.
- Do not dispose toxic liquid waste and chemicals in dumpsters designated for construction materials.
- Place small non-hazardous spill residues and materials inside a sealed container and disposed of properly.
- Examine labels for proper waste disposal instructions.
- Inspect the spill area periodically until it can be satisfactorily known that the spill material has been completely removed from the site.

C. Significant/Hazardous Spills

Only qualified staff shall cleanup hazardous spillage.

1. **Notify the resident engineer immediately. -** The contractor will follow up with a written report.

2. **Notify Local Emergency Response (911).**

- The resident engineer or the contractor will notify the local emergency response by dialing 911.
- The resident engineer will notify the proper County officials. It is the responsibility of the resident engineer to have all emergency telephone numbers at the construction site.

3. **Notify the Governor's Office of Emergency Services Warning Center.**

- The resident engineer will notify the Governor's Office of Emergency Services Warning Center at (805) 852-7550.
- The resident engineer will follow up with a copy of the contractor's written report.

4. **Notify the National Response Center, if needed.**

- For spills of federal reportable quantities, the resident engineer will notify the National Response Center at (800) 424-8802.
- The resident engineer will follow up with a copy of the contractor's written report.

5. **Contact the Hazardous Materials team.**

    - The services of a spill contractor or a Hazardous Materials team should be obtained immediately.
    - Construction personnel shall not attempt a clean up until the appropriate and qualified staff has arrived at the job site.

6. **Contact Other Appropriate Agencies.**

    - Other agencies which may need to be consulted include the Fire Department, the Public Works Department, the Coast Guard, the California Highway Patrol, the City/County Police Department, the Department of Toxic Substances, the California Division of Oil and Gas, Cal/OSHA, etc.

Appendix E contains a copy-ready Non-Storm Water Spill Log to document any significant non-storm water discharges. The Non-Storm Water Spill Log shall include the date of the spill, the estimate quantity of the spill and the name of the person who logged the spill.

500.4.2 – Waste Management and Disposal

Contractor shall describe within this section of the SWPPP their waste and disposal management. The contractor shall address the following items, but not limited to:

1) General

The purpose of this section is to outline practices for the proper disposal of waste. The discharge of pollutants to storm water from solid or construction waste will be reduced or prevented by providing designated waste collection areas and containers, arranging for regular disposal, and training employees and contractors. The following steps shall be taken to keep the construction site clean and reduce pollution:

- Select designated waste collection area on-site.

- Inform trash-hauling contractors that only watertight dumpsters will be accepted for on-site use. Inspect dumpsters for leaks and repair dumpsters that are not watertight.

- Place dumpsters under roofs or cover them with plastic sheeting at the end of each workday and during rainy weather. If plastic is used, dumpster contents shall be protected from storm water by securing the plastic around the outside of the dumpster.

- Never clean out a dumpster by hosing it down on the construction site. Return dumpsters to the trash-hauling contractor for cleaning.

- Locate sanitary facilities in a convenient location at least 50 feet from drainage conveyance systems.

- Sanitary/septic facilities shall be regularly maintained in good working condition and not allowed to overflow.

- Steel members, such as rivets, cut steel and grindings shall be managed, so as to prevent the material from entering San Francisco Bay, or drainage conveyances. All material shall be collected for disposal or recycling at a properly credentialled facility. Details on waste management practices for steel members shall be included in the contractor's SWPPP.

Location of all waste collection sites, including dumpsters and sanitary facilities shall be included and identified in the contractor's SWPPP (i.e. WPCDs).

2) Concrete Washout

Concrete washout areas will vary depending on construction operations and the location of work. The following criteria will guide the selection of washout areas and practices:

- Locate the washout areas at least 50 feet from storm drains, open ditches, or water bodies.

- Construct a temporary pit or berm area large enough to contain liquid and solid waste. Do not allow runoff from this area.

- Construct the concrete washout area in a sufficient size to allow the settlement of suspended materials.

- Cover the concrete washout during storm events to prevent precipitation from entering the washout. Secure the cover so that it cannot be removed as a result of wind or thefts.

- Expose the concrete washout area to direct sunlight in order for sufficient surface area to be conducive to the evaporation of water.

- Maintain the washout area regularly. Collect solid material weekly and dispose with other solid concrete debris.

3) Concrete Debris/Asphalt Debris

Concrete debris or asphalt debris shall be handled in the accordance with the following:

- Recycle, not mix, concrete and asphalt debris from structures and broken pavement with other debris.

- Do not allow sweepings from exposed aggregate concrete to be washed into the street or storm drain. Collect and return sweepings to aggregate base stockpile, or dispose of them in the trash.

- Do not allow excess concrete to be dumped on site, except in designated areas. Concrete washout areas may be considered for the disposal of excess concrete.

- Concrete / asphalt debris stockpile shall be covered during windy and rainy conditions to prevent dispersion and run-off of fine particles.

- Avoid creating runoff when washing concrete to remove fine particles and expose aggregate, by draining water into a bermed or level area.

- Shovel or vacuum concrete debris and saw cut slurry and remove from the site. Cover or barricade storm drains during saw cutting operations to contain slurry.

- Apply concrete, asphalt, and seal coats during dry weather. Keep fresh concrete and asphalt out of storm drains, creeks and other water bodies by scheduling paving operations during dry weather periods, so that the material will "cure" prior to storm water flow across paved surfaces.

- Always park pavers over drip pans or absorbent materials, since they tend to drip continuously.

4) Litter Control

Receptacles for the collection of general debris and litter shall be available at the site. Dumpster locations shall be identified on the site map of the contractor's SWPPP.

The contractor shall conduct weekly pick-up of litter around the construction site. The contractor may conduct this collection of litter in a manner known as a "Police Call" in which all activity ceases and all members of the construction site act as a team to line-up in a shoulder-to-shoulder fashion and walk the construction site picking up litter and debris. The collection of litter is especially important during windy weather or before the onset of rains. Erosion control devices tend to collect litter; this litter shall be removed promptly. Litter collection days shall be scheduled to coincide with the waste collection days.

In addition, because erosion control devices tend to collect litter, extra care should be taken to remove the accumulated litter so that the water pollution control measures can continue to function effectively.

5) Hazardous Waste

Hazardous materials are to be managed in accordance with all applicable laws and the Special Provisions. The contractor shall be required to describe the locations of the material to be removed, and the handling and disposal practices within their SWPPP.

Other than hazardous soil, the contractor may temporarily store hazardous waste at the site for 90 days. Management and storage of hazardous soil shall comply with the Special Provisions. Contractor shall provide a WPCD detailing the storage of hazardous waste.

500.5 MAINTENANCE, INSPECTION AND REPAIR

While many of the storm water pollution control measures are related to practices, some are actually structural controls which, in order to function properly, require ongoing inspection, maintenance and repair.

Appendix F outlines procedures to ensure that storm water management measures identified within the SWPPP are maintained in good and effective condition and are properly repaired or restored. Additionally, a monitoring program shall be implemented as directed by Section 500.10.
The following is a list of persons to contact and are available to solve potential problems in the event of emergency:

Caltrans Resident Engineer

_____

_____

Contractor

_____

_____

Local Authority

_____

_____

500.6 TRAINING

Caltrans personnel who are assigned the responsibility of meeting SWPPP requirements have taken an annual average of four (4) hours mandatory training for this purpose.

Prior to project set up, it is recommended that pertinent employees of the contractor and subcontractors participate in a storm water pollution prevention-training workshop. The workshop should cover basic storm water information, the requirements of the federal permit and the SWPPP. Specifically, the workshop should focus on implementation, inspection, and maintenance of storm water controls. Also, provide information regarding the background and qualifications of those providing training or designated to conduct Storm Water Inspections.

500.7 LIST OF CONTRACTORS/SUBCONTRACTORS

The implementation of the SWPPP shall be the responsibility of the contractor. The contractor shall notify in writing all subcontractors of the SWPPP requirements. The contractor shall provide in the SWPPP a listing of all subcontractors, including a general description of the subcontractor's responsibilities, contact name, address, phone number, pager or field phone number, and the date the notification letter that was sent for each subcontractor employed on the project. A sample notification letter and copy-ready Subcontractor Notification Log are included in Appendix G. It is important that the contractor stipulate the subcontractor's responsibility under the SWPPP.

500. 8 OTHER PLANS/PERMITS

The contractor shall identify and incorporate into the SWPPP any applicable requirements from permits that other agencies may have issued the project. Copies of permits from outside agencies will be supplied by the resident engineer. The contractor shall keep a copy of such permits on the site.

500.9 POST-CONSTRUCTION STORM WATER MANAGEMENT

The SWPPP shall describe post-construction storm water management including control practices, operation and maintenance, funding sources, and the responsible party. The following statement shall be included in the SWPPP subject to site specific modifications by the resident engineer:

> *The post-construction control practices are listed in Section 500.2.2.9 Locations of Post-Construction Control Practices of the SWPPP. Upon completion and acceptance of all construction work, Caltrans will be responsible for maintaining post-construction control measures.*

500.10 MONITORING PROGRAM AND REPORTS

A monitoring program and reporting system is a record system process to find out how well the BMPs are working and to evaluate whether additional BMPs are required. It is the responsibility of the contractor to implement the SWPPP. Caltrans's resident engineer will ensure compliance with permit requirements and contract specifications; however, the contractor shall be required to conduct inspections and monitoring in accordance with the following:

500.10.1 Site Inspections

Inspections of the construction site are required to identify deficient measures as follows:

a) Prior to a forecasted storm.

b) After each storm event.
c) At 24-hour intervals during extended precipitation events.
d) Routinely, on a weekly basis.

The results of the inspection and assessment shall be recorded in writing. The inspection report shall include the inspection date, name of inspector(s), and the observations made. A sample copy of a Storm Water Pollution Inspection Sheet (Appendix H) shall be used. It is the responsibility of the Contractor to tailor the Storm Water Pollution Inspection Sheet to the project. A tracking or follow up procedure shall follow any inspection that identifies deficiencies in BMPs. A copy of the Storm Water Pollution Inspection Sheet shall be submitted to the resident engineer upon completion of each inspection. A log of inspections shall also be kept on the copy-ready Storm Water Pollution Inspection Log (Appendix H). The contractor shall maintain copies of each completed Storm Water Pollution Inspection Sheet and Log on site.

500.10.2 Discharge Monitoring

The contractor shall comply with the Special Provisions in monitoring discharges. Suspended solids shall be removed during the dewatering operations. The discharge shall not cause bottom sediments, aquatic vegetation or surface soils to become disturbed. Visual observations of both the discharge and the receiving water body shall be recorded in a written report provided weekly to the resident engineer including photos. The observations made during monitoring shall include the color, size of affected area, presence of suspended materials, presence of water fowl and aquatic wildlife, wind direction and velocity, tidal condition, atmospheric condition, time, date and name of inspector. During monitoring events, the contractor shall obtain NTU measurements for the discharge turbidity and the receiving water (background) turbidity. Observations, at a minimum, shall be recorded one hour prior to discharge, during the first ten minutes of initiating discharge, every four hours during discharge and upon cessation of discharge. Observations and turbidity measurements shall be recorded in a tabular format using the Dewatering / Field Monitoring Sheet. The Dewatering / Field Monitoring Sheet shall be tailored to the project. A sample Dewatering / Field Monitoring Sheet is contained in Appendix I.

500.10.3 Compliance Certification

The contractor shall annually certify to the resident engineer that all construction operations are in compliance with the requirements of the Special Provisions, especially provisions to meet the requirements of the Permit to implement the SWPPP. The deadline for submittal of the certification of compliance to the resident engineer shall be no later than June 15 of each year. A copy-ready Annual Certification of Compliance form contained in Appendix J shall be used for making the annual certification.

500.10.4 Non-Compliance Reporting

The contractor shall report any non-compliance at the time of discovery to the resident engineer. The report shall be a written submission containing a description of the non-compliance and its cause; the period on non-compliance, including exact dates and times; corrective actions,

including the expected time for ending the non-compliance; and steps taken or planned to reduce, eliminate, and prevent recurrence of the non-compliance. A sample of Notice of Non-Compliance form is included in Appendix K.

SECTION 600 AMENDMENTS

This conceptual SWPPP has been prepared as a minimal guide. The contractor and the resident engineer are responsible for updating the SWPPP to reflect the actual field conditions.

All substantive changes shall be incorporated into the SWPPP and recorded in the SWPPP amendment log provided at the front of this Conceptual SWPPP as well as on the Amendment Log in Appendix L. All SWPPP amendments shall be in letter format and shall include revised WPCDs, as appropriate. The SWPPP amendment shall be certified by the contractor prior to submittal to the RE for review and approval. Amendments to the SWPPP become effective when the SWPPP Amendment Certification and Approval form has been signed and dated by the resident engineer. A sample SWPPP Amendment Certification and Approval form is included in Appendix L. Approved amendments shall be attached to the contractor's on-site SWPPP. The following details shall be included in the amendment:

- Discussion of who requested the amendment.
- Description of the location of proposed change.
- Description of the reason for change.
- Description of the original proposed BMP, if any.
- Description of the new proposed BMP.
- Any revised WPCDs for detail or location changes

SECTION 700 ADDITIONAL CALTRANS REQUIREMENTS

700.1 COPY OF PERMIT

The SWPPP shall include, in an appendix, a copy of the applicable permits. The Special Provisions specify where copies of the permits may be obtained.

700.2 BMP CONSIDERATION WORKSHEET

The SWPPP shall include a completed BMP Consideration Checklist[1] showing that the contractor has considered all BMPs listed hereon. A copy-ready BMP Consideration Checklist form is included in Appendix M.

700.3 SWPPP CHECKLIST

The SWPPP shall include a SWPPP Checklist[1] for Construction Activities, completed by the contractor, to ensure that all required items have been included. A copy-ready SWPPP Checklist for Construction Activities is included in Appendix N.

700.4 SCHEDULE OF VALUES

The SWPPP shall include a schedule of values as required by the Special Provisions. The cost breakdown shall reflect all items of work, quantities, and costs for the water pollution control measures. The sum of the total costs for items included in the SWPPP shall be equal to the contract lump sum bid for water pollution control measures. Appendix O provides a sample table of the schedule of values that is to be completed by the contractor.

[1] The BMP Consideration Checklist and SWPPP Checklist are only required for the draft submitted of the SWPPP. Once certified, these Checklists may be omitted.

SECTION 800 LOCAL PERMIT REQUIREMENTS

In addition to the items required under the General Permit, this section of the SWPPP shall address any additional issues required under the provisions of the applicable local permit.

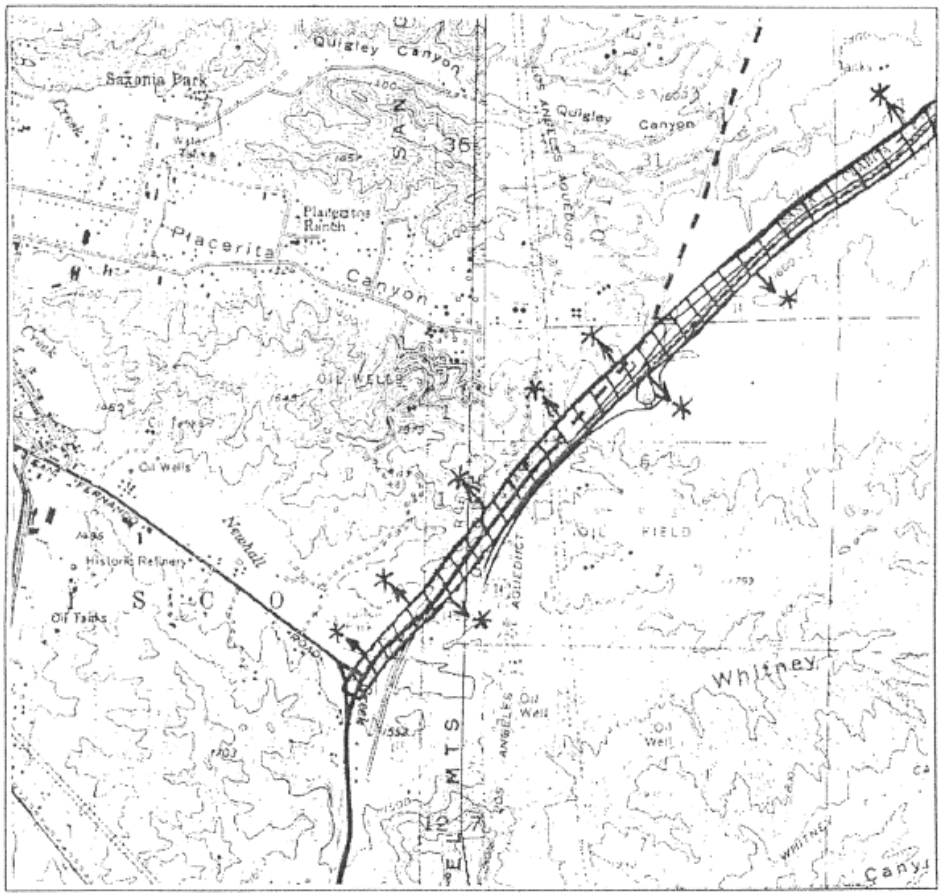
APPENDIX A

TOPOGRAPHY MAPS

STORM WATER POLLUTION PREVENTION PLAN

EXAMPLE

VICINITY MAP
FOR
ROUTE 14
SANTA CLARITA, CALIFORNIA



LEGEND:

* DISCHARGE POINT
— DIRECTION OF FLOW
SITE

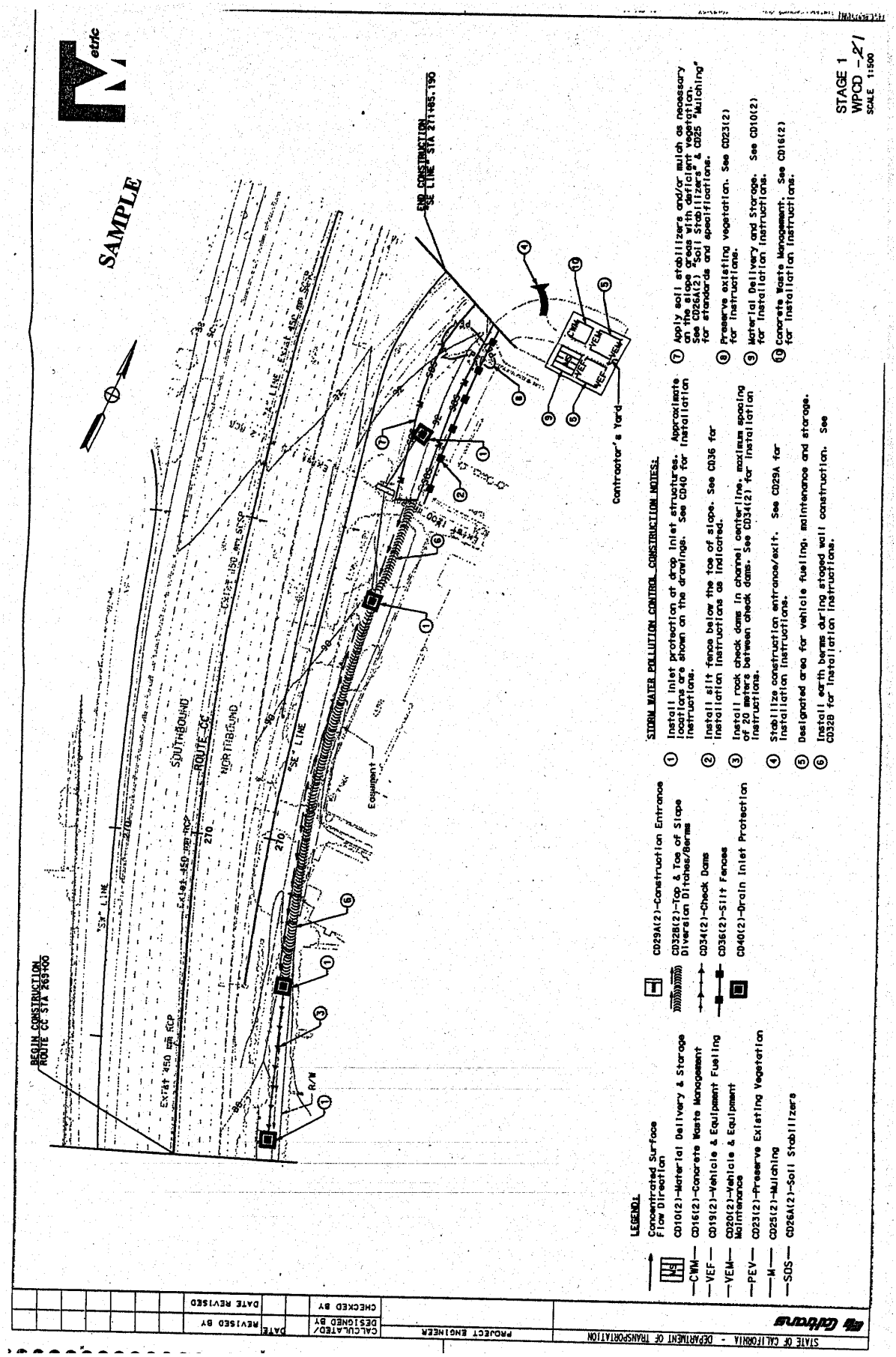
N.T.S.

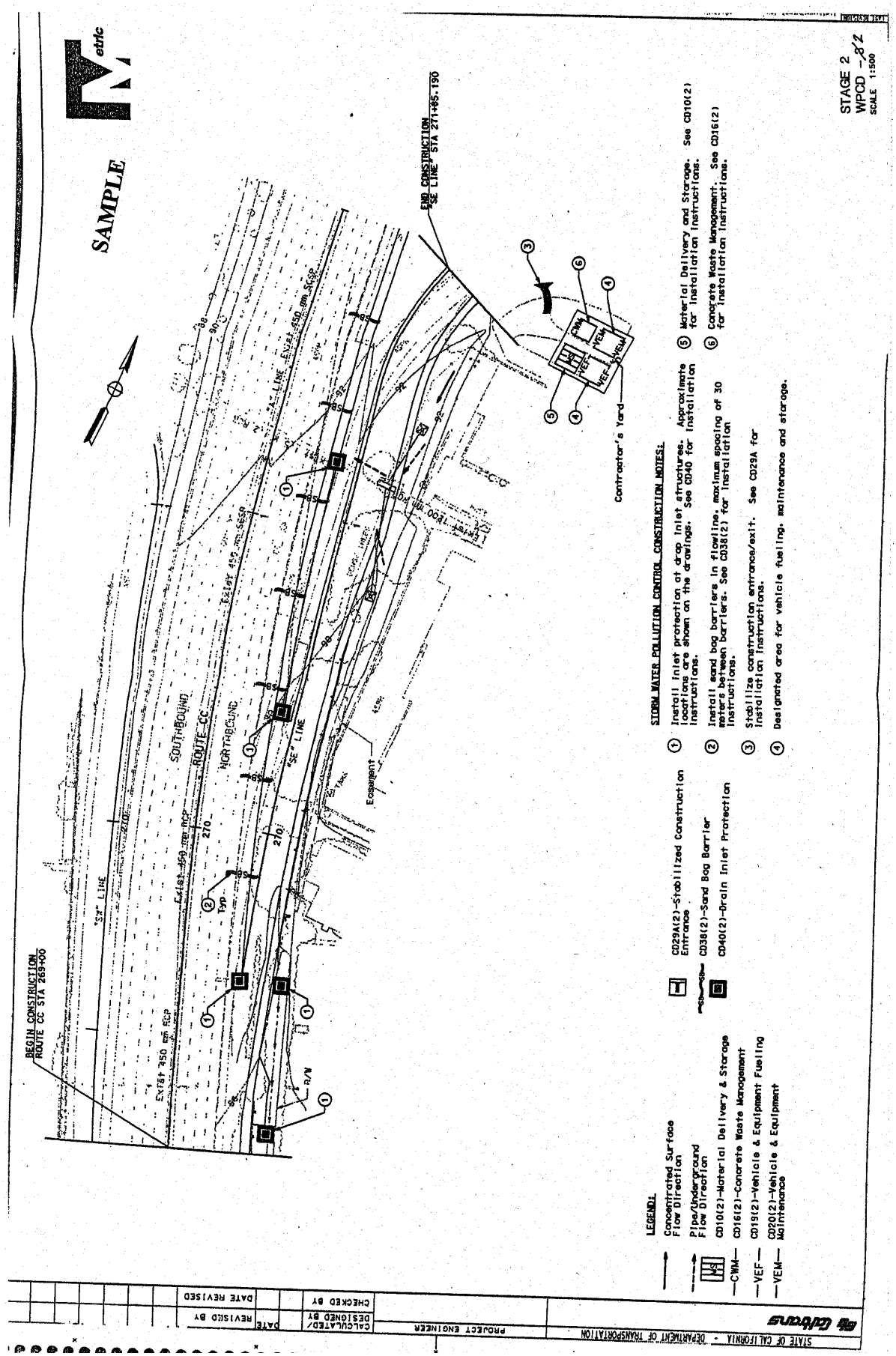
E:\537001\SWPPP1.DWG

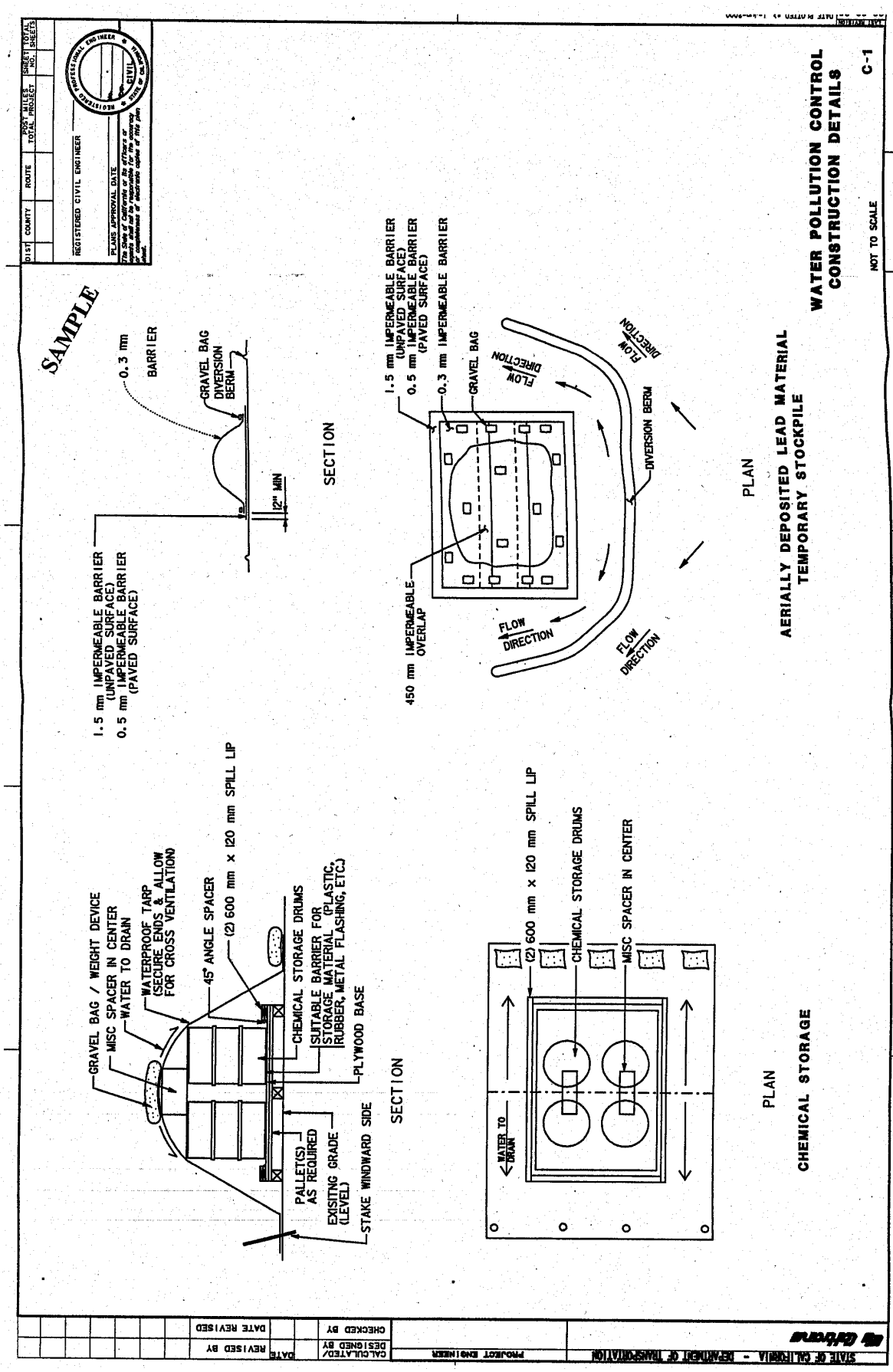
APPENDIX B

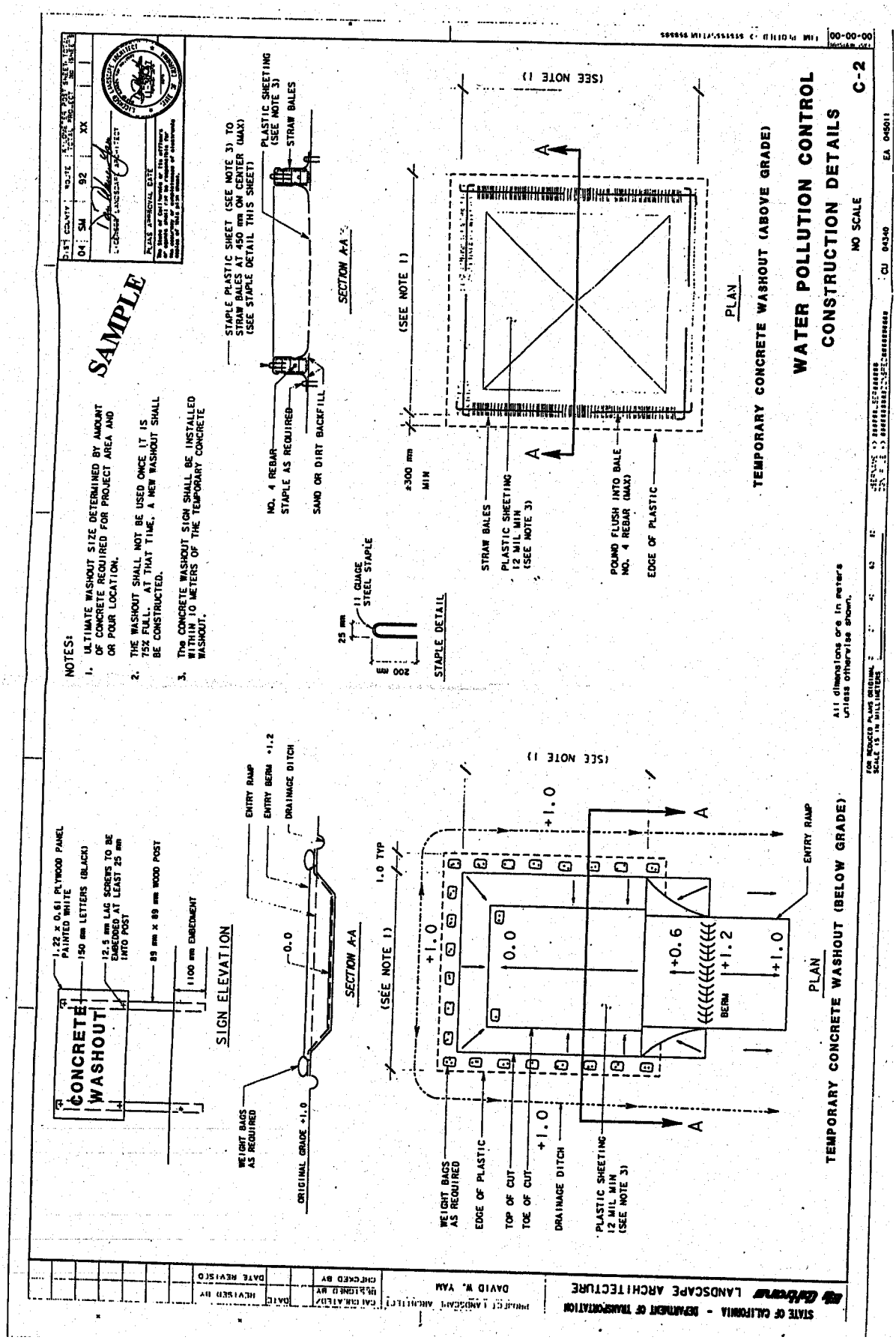
WATER POLLUTION CONTROL DRAWINGS

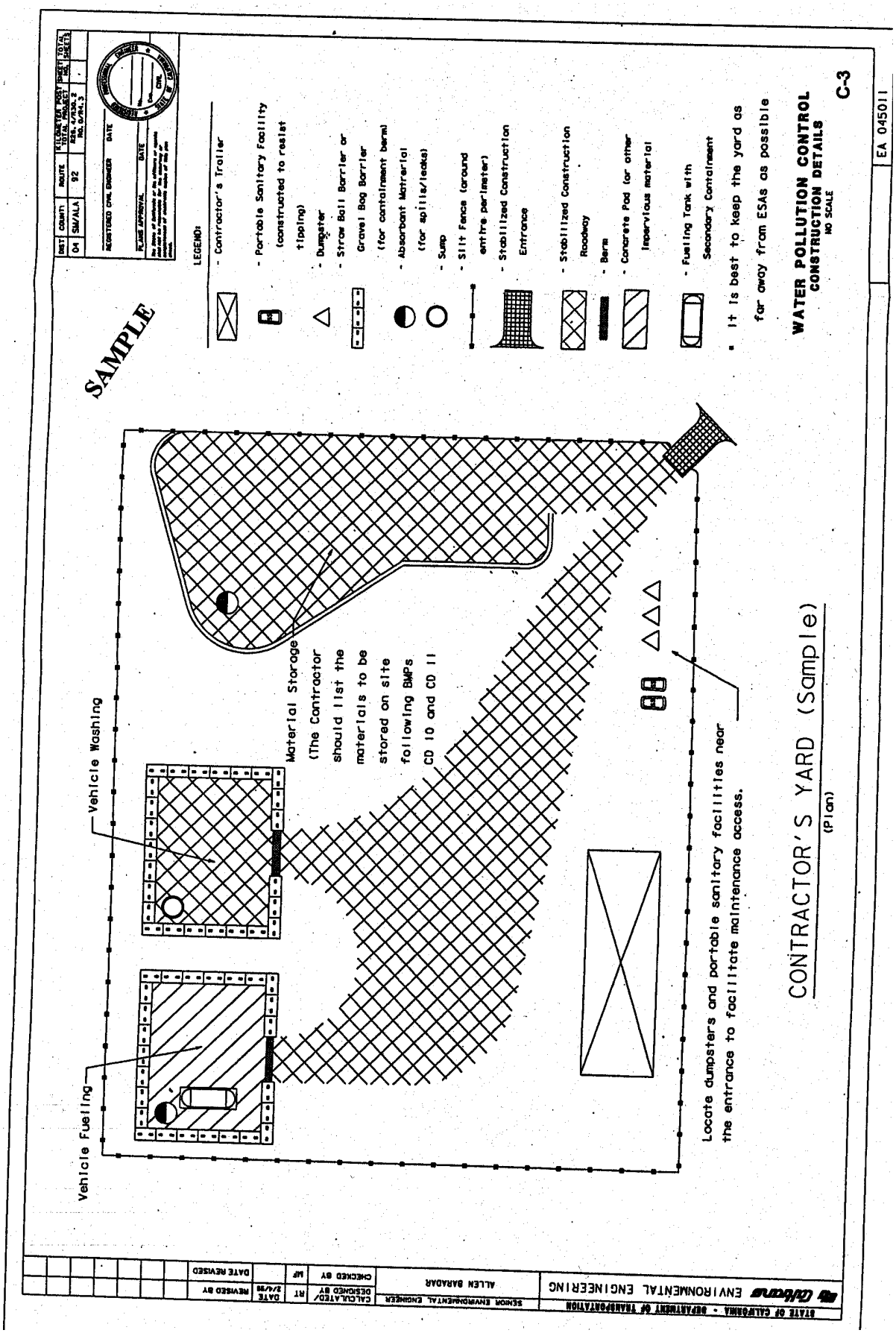
Drawing Description	Drawing Number
Water Pollution Control Drawings	WPCD-1 to WPCD-2
Construction Details	C-1 to C-4
Dewatering Schematic	

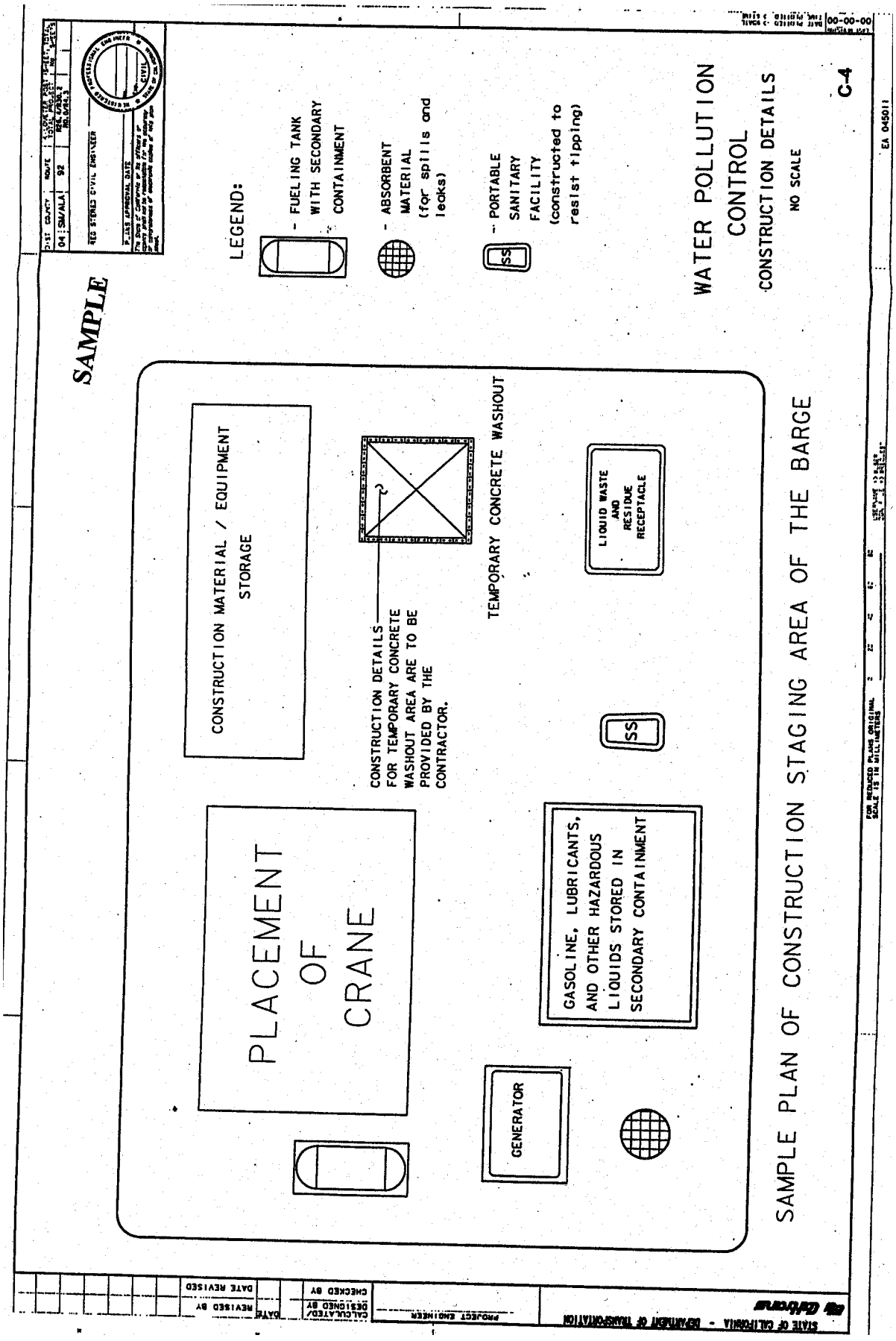

SAMPLE
Metric
BEGIN CONSTRUCTION ROUTE 05 STA 269+00
END CONSTRUCTION SE LINE STA 271+85.190
SOUTHBOUND
NORTHBOUND
ROUTE 05
SE LINE
Easement
Contractor's Yard
STAGE 1
WPCD -21
SCALE 1:500
LEGEND:
Concentrated Surface Flow Direction
CD10(2)-Material Delivery & Storage
CD16(2)-Concrete Waste Management
CD19(2)-Vehicle & Equipment Fueling
CD20(2)-Vehicle & Equipment Maintenance
CD23(2)-Preserve Existing Vegetation
CD25(2)-Mulching
CD26A(2)-Soil Stabilizers
CD29A(2)-Construction Entrance
CD32B(2)-Top & Toe of Slope Diversion Ditches/Berms
CD34(2)-Check Dams
CD35(2)-Silt Fences
CD40(2)-Drain Inlet Protection
STORM WATER POLLUTION CONTROL CONSTRUCTION NOTES:
1 Install inlet protection at drop inlet structures. Approximate locations are shown on the drawing. See CD40 for installation instructions.
2 Install silt fence below the toe of slope. See CD36 for installation instructions as indicated.
3 Install rock check dams in channel centerline, maximum spacing of 20 meters between check dams. See CD34(2) for installation instructions.
4 Stabilize construction entrance/exit. See CD29A for installation instructions.
5 Designated area for vehicle fueling, maintenance and storage.
6 Install earth berms during staged wall construction. See CD32B for installation instructions.
7 Apply soil stabilizers and/or mulch as necessary on the slope areas with deficient vegetation. See CD26A(2) "Soil Stabilizers" & CD25 "Mulching" for standards and specifications.
8 Preserve existing vegetation. See CD23(2) for instructions.
9 Material Delivery and Storage. See CD10(2) for installation instructions.
10 Concrete Waste Management. See CD16(2) for installation instructions.
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
PROJECT ENGINEER
CALCULATED/ DESIGNED BY
CHECKED BY
DATE REVISED
REVISED BY
DATE REVISED

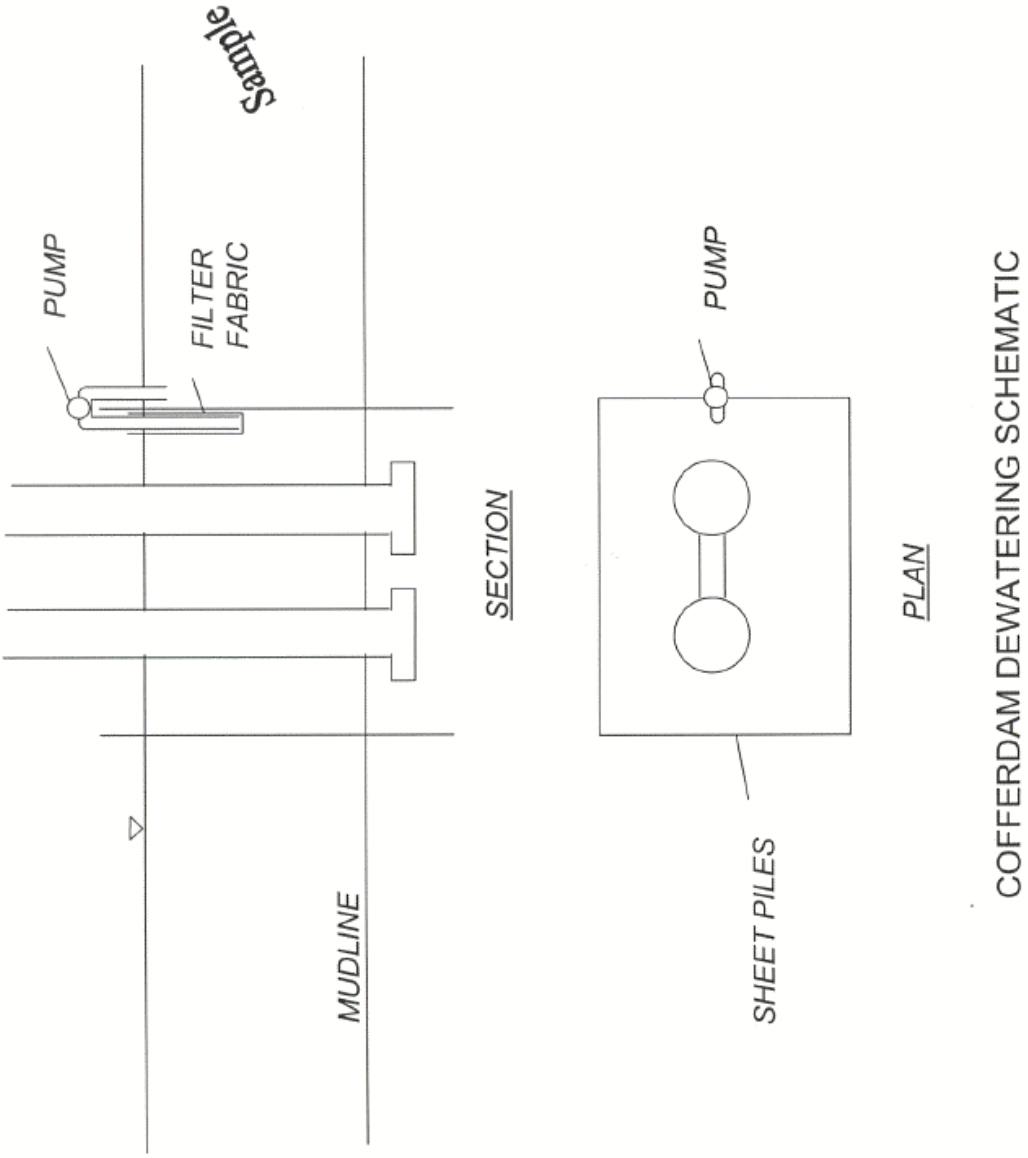

SAMPLE
STAGE 2
WPCD -8'2
SCALE 1:500
BEGIN CONSTRUCTION
ROUTE CC STA 269+00
END CONSTRUCTION
SE LINE STA 271+65.190
ROUTE CC
SOUTHBOUND
NORTHBOUND
"SE" LINE
Easement
Contractor's Yard
STORM WATER POLLUTION CONTROL CONSTRUCTION NOTES:
1 Install inlet protection at drop inlet structures. Approximate locations are shown on the drawings. See CD40 for installation instructions.
2 Install sand bag barriers in flowline, maximum spacing of 30 meters between barriers. See CD38(2) for installation instructions.
3 Stabilize construction entrance/exit. See CD29A for installation instructions.
4 Designated area for vehicle fueling, maintenance and storage.
5 Material Delivery and Storage. See CD10(2) for installation instructions.
6 Concrete Waste Management. See CD16(2) for installation instructions.
LEGEND:
Concentrated Surface Flow Direction
Pipe/Underground Flow Direction
CD10(2)-Material Delivery & Storage
CD16(2)-Concrete Waste Management
CD19(2)-Vehicle & Equipment Fueling
CD20(2)-Vehicle & Equipment Maintenance
CD29A(2)-Stabilized Construction Entrance
CD38(2)-Sand Bag Barrier
CD40(2)-Drain Inlet Protection
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
PROJECT ENGINEER
CALCULATED/ DESIGNED BY
CHECKED BY
DATE REVISED
REVISED BY
DATE


SAMPLE
WATER POLLUTION CONTROL
CONSTRUCTION DETAILS
C-1
NOT TO SCALE
AERIALLY DEPOSITED LEAD MATERIAL
TEMPORARY STOCKPILE
SECTION
PLAN
0.3 mm BARRIER
GRAVEL BAG DIVERSION BERM
12" MIN
1.5 mm IMPERMEABLE BARRIER (UNPAVED SURFACE)
0.5 mm IMPERMEABLE BARRIER (PAVED SURFACE)
450 mm IMPERMEABLE OVERLAP
GRAVEL BAG
FLOW DIRECTION
DIVERSION BERM
CHEMICAL STORAGE
GRAVEL BAG / WEIGHT DEVICE
MISC SPACER IN CENTER
WATER TO DRAIN
WATERPROOF TARP (SECURE ENDS & ALLOW FOR CROSS VENTILATION)
45° ANGLE SPACER
(2) 600 mm x 120 mm SPILL LIP
CHEMICAL STORAGE DRUMS
SUITABLE BARRIER FOR STORAGE MATERIAL (PLASTIC, RUBBER, METAL FLASHING, ETC.)
PLYWOOD BASE
PALLET(S) AS REQUIRED
EXISTING GRADE (LEVEL)
STAKE WINDWARD SIDE
MISC SPACER IN CENTER
REGISTERED CIVIL ENGINEER
PLANS APPROVAL DATE
DIST
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET NO.
TOTAL SHEETS
CU 00000
EA 000000
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
PROJECT ENGINEER
CALCULATED/ DESIGNED BY
CHECKED BY
DATE REVISED
REVISED BY
DATE


SAMPLE
NOTES:
1. ULTIMATE WASHOUT SIZE DETERMINED BY AMOUNT OF CONCRETE REQUIRED FOR PROJECT AREA AND OR POUR LOCATION.
2. THE WASHOUT SHALL NOT BE USED ONCE IT IS 75% FULL. AT THAT TIME, A NEW WASHOUT SHALL BE CONSTRUCTED.
3. The CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 10 METERS OF THE TEMPORARY CONCRETE WASHOUT.
CONCRETE WASHOUT
SIGN ELEVATION
1.22 x 0.61 PLYWOOD PANEL PAINTED WHITE
150 mm LETTERS (BLACK)
12.5 mm LAG SCREWS TO BE EMBEDDED AT LEAST 25 mm INTO POST
89 mm x 89 mm WOOD POST
1100 mm EMBEDMENT
STAPLE PLASTIC SHEET (SEE NOTE 3) TO STRAW BALES AT 450 mm ON CENTER (MAX) (SEE STAPLE DETAIL THIS SHEET)
PLASTIC SHEETING (SEE NOTE 3)
STRAW BALES
NO. 4 REBAR STAPLE AS REQUIRED
SAND OR DIRT BACKFILL
SECTION A-A
25 mm
200 mm
11 GUAGE STEEL STAPLE
STAPLE DETAIL
(SEE NOTE 1)
±300 mm MIN
STRAW BALES
PLASTIC SHEETING 12 MIL MIN (SEE NOTE 3)
POUND FLUSH INTO BALE NO. 4 REBAR (MAX)
EDGE OF PLASTIC
PLAN
TEMPORARY CONCRETE WASHOUT (ABOVE GRADE)
ENTRY RAMP
ENTRY BERM +1.2
DRAINAGE DITCH
0.0
SECTION A-A
WEIGHT BAGS AS REQUIRED
ORIGINAL GRADE +1.0
1.0 TYP
+1.0
+0.6
BERM
EDGE OF PLASTIC
TOP OF CUT
TOE OF CUT
DRAINAGE DITCH
PLASTIC SHEETING 12 MIL MIN (SEE NOTE 3)
PLAN
TEMPORARY CONCRETE WASHOUT (BELOW GRADE)
WATER POLLUTION CONTROL
CONSTRUCTION DETAILS
NO SCALE
C-2
All dimensions are in meters unless otherwise shown.
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
LANDSCAPE ARCHITECTURE
DAVID W. YAM
DATE REVISED
REVISED BY
CALCULATED/DESIGNED BY
CHECKED BY
DIST COUNTY ROUTE
04 SM 92 XX
00-00-00
CU 04340
EA 045011


SAMPLE
LEGEND:
- Contractor's Trailer
- Portable Sanitary Facility (constructed to resist tipping)
- Dumpster
- Straw Bail Barrier or Gravel Bag Barrier (for containment berm)
- Absorbant Material (for spills/leaks)
- Sump
- Silt Fence (around entire perimeter)
- Stabilized Construction Entrance
- Stabilized Construction Roadway
- Berm
- Concrete Pad (or other impervious material
- Fueling Tank with Secondary Containment
* It is best to keep the yard as far away from ESAs as possible
WATER POLLUTION CONTROL
CONSTRUCTION DETAILS
NO SCALE
C-3
EA 045011
CONTRACTOR'S YARD (Sample)
(Plan)
Vehicle Washing
Material Storage (The Contractor should list the materials to be stored on site following BMPs CD 10 and CD 11
Vehicle Fueling
Locate dumpsters and portable sanitary facilities near the entrance to facilitate maintenance access.
ENVIRONMENTAL ENGINEERING
ALLEN BARADAR
SENIOR ENVIRONMENTAL ENGINEER
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION


SAMPLE
LEGEND:
- FUELING TANK WITH SECONDARY CONTAINMENT
- ABSORBENT MATERIAL (for spills and leaks)
- PORTABLE SANITARY FACILITY (constructed to resist tipping)
WATER POLLUTION CONTROL
CONSTRUCTION DETAILS
NO SCALE
C-4
CONSTRUCTION MATERIAL / EQUIPMENT STORAGE
CONSTRUCTION DETAILS FOR TEMPORARY CONCRETE WASHOUT AREA ARE TO BE PROVIDED BY THE CONTRACTOR.
TEMPORARY CONCRETE WASHOUT
LIQUID WASTE AND RESIDUE RECEPTACLE
PLACEMENT OF CRANE
GASOLINE, LUBRICANTS, AND OTHER HAZARDOUS LIQUIDS STORED IN SECONDARY CONTAINMENT
GENERATOR
SS
SAMPLE PLAN OF CONSTRUCTION STAGING AREA OF THE BARGE


Sample
PUMP
FILTER FABRIC
MUDLINE
SECTION
PUMP
SHEET PILES
PLAN
COFFERDAM DEWATERING SCHEMATIC

APPENDIX C

COMPUTATION SHEET
FOR
DETERMINING RUNOFF COEFFICIENTS

Computation Sheet for Determining Runoff Coefficients

Total Site Area	=	_____	(A)
Existing Site Conditions			
Impervious Site Area[1]	=	_____	(B)
Impervious Area Runoff Coefficient[2,4]	=	0.95	(C)
Pervious Site Area[3]	=	_____	(D)
Pervious Site Area Runoff Coefficient[4]	=	_____	(E)
Existing Site Area= $\frac{(B \cdot C) + (D \cdot E)}{A}$ Runoff Coefficient	=	_____	(F)
Proposed Site Conditions (After Construction)			
Impervious Site Area[1]	=	_____	(G)
Impervious Site Runoff Coefficient[2,4]	=	0.95	(H)
Pervious Site Area[3]	=	_____	(I)
Pervious Site Area Runoff Coefficient[4]	=	_____	(J)
Proposed Site Area= $\frac{(G \cdot H) + (I \cdot J)}{A}$ Runoff Coefficient	=	_____	(K)

1 Includes paved areas, areas covered by buildings, and other impervious surfaces.
2 Use 0.95 unless lower or higher runoff coefficients can be verified.
3 Includes areas of vegetation, most unpaved or uncovered soil surfaces, and other pervious areas.
4 See Table C-1 and C-2 for runoff coefficients

Attachment C
Computation Sheet for Determining
Runoff Coefficients

Table C-1
Runoff Coefficients for Undeveloped Areas
Watershed Types

	Extreme	*High*	*Normal*	*Low*
Relief	0.28 -0.35 Steep, rugged terrain with average slopes above 30%	0.20 - 0.28 Hilly, with average slopes of 10 to 30%	0.14 -0.20 Rolling, with average slopes of 5 to 10%	0.08 - 0.14 Relatively flat land, with average slopes of 0 to 5%
Soil Infiltration	0.12 - 0.16 No effective soil cover, either rock or thin soil mantle of negligible infiltration capacity	0.08 - 0.12 Slow to take up water, clay or shallow loam soils of low infiltration capacity, imperfectly or poorly drained	0.06 - 0.08 Normal; well drained light or medium textured soils, sandy loams, silt and silt loams	0.04 - 0.06 High; deep sand or other soil that takes up water readily, very light well drained soils
Vegetal Cover	0.12 - 0.16 No effective plant cover, bare or very sparse cover	0.08 - 0.12 poor to fair; clean cultivation crops, or poor natural cover, less than 20% of drainage area over good cover	0.06 - 0.08 Fair to good; about 50% of area in good grassland or woodland, not more than 50% of area in cultivated crops	0.04 - 0.06 Good to excellent; about 90% of drainage area in good grassland, woodland or equivalent cover
Surface Storage	0.10 - 0.12 Negligible surface depression few and shallow; drainage-ways steep and small, no marshes	0.08 - 0.10 Low; well defined system of small drainageways; no ponds or marshes	0.06 - 0.08 Normal; considerable surface depression storage; lakes and pond marshes	0.04 - 0.06 High; surface storage, high; drainage system not sharply defined; large flood plain storage or large number of ponds or marshes

Given An undeveloped watershed consisting of:
1) rolling terrain with average slopes of 5%,
2) clay type soils,
3) good grassland area, and
4) normal surface depressions.

Find The runoff coefficient, C, for the above watershed

Solution:

Relief	0.14
Soil Infiltration	0.08
Vegetal Cover	0.04
Surface Storage	0.06
C =	0.32

Reference: Caltrans Highway Design Manual, July 1995

APPENDIX D

NOTICE OF CONSTRUCTION

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY GRAY DAVIS, Governor

DEPARTMENT OF TRANSPORTATION
BOX 23660
OAKLAND, CA 94623-0660
(510) 286-4444
TDD (510) 286-4454

June 16, 2000

SAMPLE

LEE A. MICHELIN, Executive Officer
California Regional Water Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 94503

Attn: John Short

Dear Mr. Michelin:

Order No. 99-06-DWQ, NPDES Permit for Storm Water Discharges from the State Of California, Department Of Transportation (Caltrans) Properties, Facilities, and Activities (permit hereafter) was adopted by the State Water Resources Control Board on July 15, 1999.

As per the requirements of the permit, Caltrans District 4 is submitting the following notification to the North Coast Regional Water Quality Control Board:

Table 1: Notification Of Construction is being submitted in accordance with section H.8.a of the permit, which requires submitting this notification 30 days prior to start of construction.

If you have any questions or concerns regarding this notification, please contact Tim Mehta at (510)286-6269.

Sincerely,
HARRY Y. YAHATA
District Director
By

RON MORIGUCHI
District Office Chief
Office of Environmental Engineering

cc: File

SAMPLE

Caltrans, District 4 — *North Coast Region*

TABLE 1 : NOTIFICATION OF CONSTRUCTION
(As required by Section H.8.a. of the Caltrans Statewide NPDES Permit)

#	Contract #	County – Route-Post Mile	Description Of Work	Soil Disturbance Area, Hectares	Tentative Start Date	Tentative Completion Date	Resident Engineer (Re)/ Construction Office	Re/ Construction Office Phone	Water Bodies Impacted	Agencies' Permits (BCDC, 401 Cert., Fish & Game, Coastal Commission, Army Corp., Etc.)
1	212004	04-MRN-1-76.3/76.9	Rehabilitate Pavement And Replace Bridge	<2	07/13/00	11/10/00	S. Monemzadeh	(415)491-6235	Fallon Creek	Fish & Game, CA Coastal Commission, U.S. Army Corps of Engineers, NPDES General Permit.

APPENDIX E

NON-STORM WATER SPILL LOG

NON-STORM WATER SPILL LOG

Project Name: _____ Caltrans Contract Number: _____

DATE	NON-STORM WATER MATERIAL	ESTIMATED QUANTITY	OBSERVED BY

COMMENTS: _____

_____

_____

APPENDIX F

MAINTENANCE, INSPECTION & REPAIR PROGRAM

"Sample" Maintenance, Inspection & Repair Program

CONTROLS	INSPECTION FREQUENCY	MAINTENANCE / REPAIR MEASURES
The Contractor shall use the following guidelines for maintenance, inspection, and repair of erosion and sediment control BMPs.		
Construction Entrances and Roadways	Before and after storms. Weekly	Remove excessive soil accumulation on top of gravel (or steel corrugated steel ribbed panels).
The Contractor shall use the following guidelines for maintenance, inspection, and repair of non-storm water management and waste management and disposal BMPs.		
Water Conservation	At all times during dust control	Replace leaking hoses, fittings and sprinkling equipment as necessary.
Dewatering	Daily, during de-watering	Verify capacity of holding tanks. Clean or replace filter devices as necessary. Replace leaking hoses, fittings and pumping equipment as necessary.
Material Delivery and Storage	Daily	Replace tarps or covers as necessary. Repair or replace containment structures as necessary.
Liquid Waste Collection and Management	Daily	Inspect containment and diversion controls for proper operation. Replace leaking holding vessels, hoses, fittings and vacuum / pumping equipment as necessary.
Solid Waste Management	Daily	Police site for litter and debris. Inspect trucks off-hauling soils and wastes for leakage and cover. Repair storage and containment devices areas as necessary.
Vehicle Storage Areas	Before and after storms. Weekly	Repair leaks, relocate vehicles, place drip pans.
Vehicle & Equipment Cleaning and Washout	Monthly, before storms.	Remove leaked material. Restock spill materials. Clean vehicles offsite at vehicle washing facility. Replenish spill containment materials as necessary.
Concrete Washout	Before and after storms. Weekly	Remove accumulated debris. Replace straw bales and lining as necessary.
Spill Control Materials	Monthly, after spills cleanup	Replenish supplies and ensure integrity.
Waste Containers	Before and after storms. Weekly	Pick up refuse. Remove unacceptable materials. Segregate waste. Repair leaks. Replace waste containers as necessary.

APPENDIX G

SUBCONTRACTOR NOTIFICATION LETTER
AND
SUBCONTRACTOR NOTIFICATION LOG

"Sample" SWPPP Notification to Subcontractor

[DATE]

[Subcontractor's Name]
[Company]
[Address]
[City, State]

Dear [Subcontractor's Name]

Please be advised that the California State Water Resources Control Board has begun formal implementation of the National Pollutant Discharge Elimination System (NPDES).

In short, the purpose of this system is to eliminate pollutants from entering into the storm drain systems and eventually into our lakes, streams and ocean. Pollutants include, but are not limited to oil, grease, trash, sediment, asphaltic emulsions, and cement wastes.

[Contractor] has developed a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the State requirements.

You, as a subcontractor, are required to comply with the SWPPP and the General Permit for any work done on this site.

Any person or group who violates any condition of the General Permit may be subject to substantial penalties in accordance with the law. You are encouraged to advise each of your employees working on this project of the SWPPP.

A copy of the General Permit and the SWPPP developed for this site is available for your review at the construction office.

Please call if you have any questions.

Sincerely,

_____
General Contractor

"Sample" SUBCONTRACTOR NOTIFICATION LOG

Project Name: _____ Caltrans Contract No.: _____

SUBCONTRACTOR NAME	RESPONSIBILITIES	CONTACT NAME	ADDRESS	PHONE NUMBER	PAGER/FIELD PHONE NUMBER	DATE NOTIFICATION LETTER SENT

APPENDIX H

STORM WATER POLLUTION INSPECTION SHEET
AND
LOG

"Sample" Storm Water Pollution Inspection Sheet

Project:_____ **Date:**_____

Contractor:_____ **Time:**_____

Contractor's Inspectors:_____

Timing of Inspection (check one):

___ Before a forecasted storm

___ After a storm event

___ Daily inspection during extended storm event

___ Weekly inspection

Write "Yes," "No," or "N/A" (not applicable) in the blank provided for each question.

_____ 1. Has there been an absence of rain since the last inspection?

_____ 2. Are all sandbags, straw bales, and silt fences in-place in accordance with the SWPPP are they functioning properly?

_____ 3. Are silt fences free of accumulated litter and significant sediment?

_____ 4. Are all material handling and storage areas reasonably clean and free of spills, leaks, or other deleterious materials?

_____ 5. Are all equipment storage and maintenance areas reasonably clean and free of spills, leaks, or any other deleterious materials?

_____ 6. Are all materials and equipment covered properly?

_____ 7. Are concrete washouts functional for containing and receiving concrete wastes? Are concrete residues prevented from becoming present within the drainage systems?

_____ 8. Are material and vehicle storage areas prevented from impacting storm water runoff?

_____ 9. Are all locations of temporary soil stockpiles and construction materials in approved areas?

_____ 10. Are soil storage locations properly protected from run-on, run-off, and winds?

_____ 11. Are any un-vegetated areas free of erosion or capable of sediment transport?

_____ 12. Are waste management receptacles free of leaks? Are the contents of the receptacles properly protected from coming into contact with storm water or form coming dislodged by winds? Are waste management receptacles filled at or beyond capacity?

_____ 13. Are all discharge points free of any noticeable pollutant discharges?

_____ 14. Are all discharge points free of any significant erosion or sediment transport?

_____ 15. Are all BMPs shown on the Water Pollution Control Drawings (WPCDs) installed in the proper location and according to the details for the plan?

_____ 16. Do the WPCDs reflect current site conditions?

_____ 17. Are paved areas free of tracked sediment or other particulate matter?

_____ 18. Is sediment, debris or mud being cleaned from public roads at intersections with site access roads?

_____ 19. Are all slopes free of significant erosion?

_____ 20. Are all seeded areas properly maintained?

_____ 21. Are all structural control practices in good repair and maintained in functional order?

_____ 22. Are there any other potential water pollution control practice concern at the site?

If you answered "no" to any of the previous questions, describe the corrective actions to be taken and when the corrective actions are to be completed. Identify each response numerically, in accordance with the number designated for the question to be answered.

Storm Water Pollution Inspection Log

Project: _____

Contractor: _____ Caltrans Contract Number: _____

Date	Inspector	Comments
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____
___	_____	_____

APPENDIX I

DEWATERING / FIELD MONITORING SHEET

Dewatering / Field Monitoring Sheet

Project: _____ **Date:** _____

Contractor: _____ **Time:** _____

Contractor's Inspector(s): _____

Timing of Inspection (check one):

_____ One hour prior to discharge

_____ During first ten minutes of discharge

_____ Every __ hour(s) during discharge

_____ Upon cessation of discharge

1. Describe color, pH, and turbidity:
   Discharge Color _____ pH _____ Turbidity (NTU) _____
   Receiving Water _____ pH _____ Turbidity (NTU) _____

2. Suspended material or "sheen" present? If yes, describe:
   Discharge _____yes _____no Description _____

_____

3. Size of affected area in receiving water (if applicable):

_____

_____

4. Water fowl or aquatic wildlife present? If yes, describe:

_____

_____

5. Wind direction and velocity:

6. Tidal condition:

7. Weather condition:

8. Photographs of inspection provided? _____yes _____no

9. If suspended material or other deleterious material present, cease discharge and describe corrective actions undertaken:

APPENDIX J

CERTIFICATION AND APPROVAL FORMS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
ANNUAL CONSTRUCTION ACTIVITY CERTIFICATION (ACAC)

PART 1 - TO BE COMPLETED BY CONTRACTOR

CALTRANS CONTRACT NUMBER AND PROJECT NAME		WASTE DISCHARGE IDENTIFICATION NUMBER
CONTRACTOR'S NAME	CONTRACTOR'S ADDRESS OF RECORD	CONTRACTOR'S TELEPHONE NUMBER
CONSTRUCTION STARTING DATE	CONSTRUCTION COMPLETION DATE	COUNTY, ROUTE, POST MILES

General Description of Construction Work:

SWPPP Work Now in Process:

Planned SWPPP Work Prior to October 1st:

Planned SWPPP Work after October 1st:

List Current SWPPP Field Deficiencies:

CERTIFICATION BY CONTRACTOR

Based upon inspections of the project site over the last 12 months, or since commencement of construction on the project if less than 12 months ago, the undersigned hereby certifies that the pollutant controls identified in the SWPPP approved for the project site and the work described above are adequate and properly implemented in accordance with the terms of the Contract Special Provisions. *I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

CONTRACTOR'S SIGNATURE	DATE

PART TWO-(SEE OTHER SIDE)

STATE OF CALIFORNIA-DEPARTMENT OF TRANSPORTATION
NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM
ANNUAL CONSTRUCTION ACTIVITY CERTIFICATION-(ACAC)

PART 2- TO BE COMPLETED BY THE RESIDENT ENGINEER

1. ☐ YES ☐ NO The Storm Water Pollution Prevention Plan is signed by the contractor and approved by the Resident Engineer.

2. ☐ YES ☐ NO The SWPPP document for this project is a effective tool to identify construct, and implement Storm Water Pollution measures that reduce erosion, sediment run-off, and non-storm water discharges to the extent practicable and reasonable.

3. ☐ YES ☐ NO The Storm Water Pollution Prevention Plan measures are adequately and properly implemented and maintained in accordance with the SWPPP, Amendments, Special Provisions, and the Caltrans Storm Water Quality Handbook. [SEE "ADDITIONAL INFORMATION" BELOW]

WHEN ITEMS 1-3 ARE CHECKED "YES", THE ABOVE REFERENCED CONSTRUCTION PROJECT WILL BE CONSIDERED TO BE IN COMPLIANCE WITH THE WITH THE NPDES GENERAL PERMIT No. CAS000002 OR THE REGIONAL WATER QUALITY CONTROL PERMIT No. CAS029998, WHICH EVER IS APPLICABLE. THE RESIDENT ENGINEER SHOULD THEN COMPLETE AND SIGN THE ANNUAL CERTIFICATION BELOW. IF EITHER 1, 2, OR 3 IS CHECKED "NO" THE PROJECT WILL BE CONSIDERED NOT IN COMPLIANCE WITH THE APPLICABLE WATER QUALITY CONTROL PERMIT. FOR NON-COMPLIANCE PROJECTS THE RESIDENT ENGINEER MUST SUBMIT AN ANNUAL NOTICE OF NON-COMPLIANCE THAT CLEARLY IDENTIFIES ITEMS THAT WILL REQUIRE CORRECTIVE ACTION IN ORDER TO ACHIEVE COMPLIANCE. [SEE ATTACHMENT K-2]

ADDITIONAL INFORMATION

THE SWPPP AMENDMENT PROCESS WAS DEVELOPED TO RESOLVE DEFICIENCIES RESULTING FROM UNFORESEEN CHANGES IN SITE CONDITIONS, CONSTRUCTION OPERATIONS, OR OTHER VARIABLES NOT ACCOUNTED FOR IN THE APPROVED SWPPP DOCUMENT. PROJECTS SHALL BE CONSIDERED FOR ANNUAL CERTIFICATION WITH OUTSTANDING MINOR DEFICIENCIES. THESE DEFICIENCIES, OR THE SUM OF SAID DEFICIENCIES, SHOULD NOT EFFECT THE OVERALL INTEGRITY OF THE PROJECT'S SWPPP SYSTEM. PROJECTS MAY BE CERTIFIED CONTINGENT CERTAIN CORRECTIVE ACTIONS BE TAKEN BY THE CONTRACTOR. [SEE ATTACHMENT K-2, AND CALTRANS CERTIFICATION AREA BELOW.

3A. ☐ YES ☐ NO The SWPPP document for this project required Amendments during the last twelve months in order to comply with the applicable water quality control permit. [IF "YES", INCLUDE ATTACHMENT -J AMENDMENTS]

3B. ☐ YES ☐ NO It should be noted that the construction site and its activities experienced noteworthy deficiencies during the past twelve month period. These deficiencies are minor in nature and shall not be considered to effect the overall integrity of the Storm Water Pollution Prevention Plan system. Currently, there are (_____) outstanding deficiencies. The contractor was given a Final Notice of Outstanding Deficiencies and Order for Corrective Actions. [IF 3B is checked "YES" ATTACH SWPPP DEFICIENCY LOG SHOWING NOTEWORTHY DEFICIENCIES. INCLUDE BOTH OUTSTANDING OR RESOLVED NOTEWORTHY ISSUES. IN ADDITION, ATTACH A COPY OF ATTACHMENT K-2 THE (Final Notice of Outstanding Deficiencies and Order for Corrective Actions.

CERTIFICATION BY CALTRANS

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that the qualified personnel properly gathered and evaluated the Information submitted. Based on my inquiry of the person(s) who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowingly submitting false information.

RESIDENT ENGINEER'S SIGNATURE: DATE:

(SIGN ONLY IF CERTIFYING PROJECT)

CERTIFIED CONTINGENT CORRECTIVE ACTIONS: ☐ YES ☐ NO

SWPPP CERTIFICATION AND APPROVAL

Project Name: _____ Caltrans Contract Number _____

To Be Completed by Contractor

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____ _____
Signature Date

_____ ( )_____
Name and Title Phone Number

For Caltrans Use Only

RESIDENT ENGINEER'S APPROVAL AND CALTRANS CERTIFICATION OF THE STORM WATER POLLUTION PREVENTION PLAN

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____ _____
RE's Signature Date

_____ ( )_____
Print RE's Name RE.s Phone Number

APPENDIX K

NOTICE OF NON-COMPLIANCE

Notice of Non-Compliance

[DATE]

To: Caltrans – Resident Engineer

In accordance with the State Water Resources Control Board, National Pollutant Discharge Elimination System General Permit for Discharges of Storm Water Runoff Associated with Construction Activity, notice hereby given the following event(s) on non-compliance with the General Permit or the SWPPP for the subject site located at [insert general description of site location] occurred within _____ days prior to the date of the notice:

[describe event(s) of non-compliance]

The following actions are necessary to achieve compliance and shall be implemented by the dates stated below.

Actions to be Taken	Commencement Date	Completion Date
[list]		

Please notify the undersigned should you need any further information concerning this notice of desire to modify the above schedule.

_____ _____

Signature **Date**

_____ (_____)_____

Name, Title **Phone Number**

APPENDIX L

SWPPP AMENDMENT LOG

SWPPP Amendment Log

Project Name: _____ **Caltrans Contract Number:** _____

Amendment No.	Date	Brief Description of Amendment	Prepared by	Resident Engineer's Approval

SWPPP AMENDMENT CERTIFICATION AND APPROVAL

Project Name: _____ Caltrans Contract Number _____

To Be Completed by Contractor

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____ _____
Signature Date

_____ ( )_____
Name and Title Phone Number

For Caltrans Use Only

RESIDENT ENGINEER'S APPROVAL AND CALTRANS CERTIFICATION OF THE STORM WATER POLLUTION PREVENTION PLAN

"I certify under a penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____ _____
RE's Signature Date

_____ ( )_____
Print RE's Name RE.s Phone Number

APPENDIX M

BEST MANAGEMENT PRACTICE (BMP) CONSIDERATION CHECKLIST

BMP CONSIDERATION CHECK LIST

The contractor shall consider utilizing all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as such and shall include a brief statement describing why it is not included

BMP I.D.	BMP DESCRIPTION	MINIMUM REQUIREMENTS	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
PART 1A - SOIL STABILIZATION PRACTICES - MINIMUM REQUIREMENTS The Contractor shall implement one or more of the following BMPS					
CD23	PRESERVATION OF EXISTING VEGETATION	SEE SECTION 500.3.1			
CD24B	TEMPORARY SEEDING AND PLANTING PER PROJECT SPECIFICATIONS	SEE SECTION 500.3.1			
N/A	PERMANENT SEEDING AND PLANTING PER PROJECT SPECIFICATIONS	SEE SECTION 500.3.1			
CD25	MULCHING	SEE SECTION			
CD26A	SOIL STABILIZERS	SEE SECTION			
CD26B	GEOTEXTILES, MATS/PLASTIC COVERS & EROSION CONTROL BLANKETS	SEE SECTION 500.3.1			
CD30	SODDING, GRASS PLUGGING, & VEGETATIVE BUFFER STRIPS	SEE SECTION 500.3.1			
PART 1B - SOIL STABILIZATION PRACTICES - BMPS REQUIRING CONSIDERATION					
CD22	SCHEDULING				
CD28	TEMPORARY STREAM CROSSING				
CD29A	STABILIZED CONSTRUCTION ENTRANCE				
CD29B	STABILIZED CONSTRUCTION ROADWAY				
CD29C	ENTRANCE/OUTLET TIRE WASH				
CD31	EARTH DIKES/DRAINAGE SWALES & LINED DITCHES				
CD32A	SLOPE DRAINS/SUBSURFACE DRAINS				
CD32B	TOP & TOE OF SLOPE DIVERSION DITCHES/BERMS				
CD33A	OUTLET PROTECTION/VELOCITY DISSIPATION DEVICES				
CD33B	FLARED CULVERT END SECTIONS				
CD34	CHECK DAMS				
CD35	SLOPE ROUGHENING/ TERRACING/ROUNDING				
CD37	STRAW BALE BARRIER				
CD43	FIBER ROLL				

BMP CONSIDERATION CHECK LIST The contractor shall consider utilizing all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as such and shall include a brief statement describing why it is not included					
BMP I.D.	BMP DESCRIPTION	MINIMUM REQUIREMENTS	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
PART 2A - SEDIMENT CONTROL PRACTICES - MINIMUM REQUIREMENTS The contractor shall implement one or more of the following BMPS					
CD36	SILT FENCES	SEE SECTION 500.3.2			
CD37	STRAW BALE BARRIER	SEE SECTION 500.3.2			
CD38	SANDBAG BARRIER	SEE SECTION 500.3.2			
PART 2B - SEDIMENT CONTROL PRACTICES - BMPs REQUIRING CONSIDERATION					
CD34	CHECK DAMS				
CD39	BRUSH OR ROCK FILTER				
CD40	STORM DRAIN INLET PROTECTION				
CD41	SEDIMENT TRAPS				
CD42	SEDIMENT BASINS				
CD43	FIBER ROLLS				
PART 3A - SEDIMENT TRACKING CONTROL PRACTICES - MINIMUM REQUIREMENTS The contractor shall implement the following requirement					
N/A	INSPECTION AND CLEANING	SEE SECTION 500.3.3			
PART 3B - SEDIMENT TRACKING CONTROL PRACTICES - BMPs REQUIRING CONSIDERATION					
CD29A	STABILIZED CONSTRUCTION ENTRANCE				
CD29B	STABILIZED CONSTRUCTION ROADWAY				
CD29C	ENTRANCE/OUTLET TIRE WASH				

BMP CONSIDERATION CHECK LIST The contractor shall consider utilizing all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as such and shall include a brief statement describing why it is not included					
BMP I.D.	**BMP DESCRIPTION**	**MINIMUM REQUIREMENTS**	**CHECK IF USED**	**CHECK IF NOT USED**	**IF NOT USED, STATE REASON**
PART4A - WIND EROSION CONTROLS - MINIMUM REQUIREMENTS The contractor shall implement one or more the following BMPs when applicable					
CD23	PRESERVATION OF EXISTING VEGETATION	SEE SECTION 500.3.4			
NA	DUST CONTROL PER STANDARD SPECIFICATIONS SECTION 10	SEE SECTION 500.3.4			
PART 4B - WIND EROSION CONTROLS - BMPs REQUIRING CONSIDERATION					
CD24B	TEMPORARY SEEDING AND PLANTING				
CD25	MULCHING				
CD26A	SOIL STABILIZERS				
CD26B	GEOTEXTILES, MATS/PLASTIC COVERS AND EROSION CONTROL BLANKETS				
CD29B	STABILIZED CONSTRUCTION ROAD				

BMP CONSIDERATION CHECK LIST The contractor shall consider utilizing all BMPs listed hereon. Those BMPs which are not included in the SWPPP shall be checked as such and shall include a brief statement describing why it is not included					
BMP I.D.	BMP DESCRIPTION	MINIMUM REQUIREMENTS	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
PART 5 - NON-STORM WATER MANAGEMENT & WASTE MANAGEMENT & DISPOSAL - MINIMUM REQUIREMENTS The contractor shall implement the following BMPs as applicable					
CD4	WATER CONSERVATION PRACTICES	SEE SECTION 500.4			
CD7	DEWATERING	SEE SECTION 500.4			
CD8	PAVING OPERATIONS	SEE SECTION 500.4			
CD9	STRUCTURE CONSTRUCTION AND PAINTING	SEE SECTION 500.4			
CD10	MATERIAL DELIVERY AND STORAGE	SEE SECTION 500.4			
CD11	MATERIAL USE	SEE SECTION 500.4			
CD12	SPILL PREVENTION	SEE SECTION 500.4			
CD13	SOLID WASTE MANAGEMENT	SEE SECTION 500.4			
CD14	HAZARDOUS WASTE MANAGEMENT	SEE SECTION 500.4			
CD15	CONTAMINATED SOIL MANAGEMENT	SEE SECTION 500.4			
CD16	CONCRETE WASTE MANAGEMENT	SEE SECTION 500.4			
CD17	SANITARY/SEPTIC WASTE MANAGEMENT	SEE SECTION 500.4			
CD18	VEHICLE & EQUIPMENT CLEANING	SEE SECTION 500.4			
CD19	VEHICLE & EQUIPMENT FUELING	SEE SECTION 500.4			
CD20	VEHICLE & EQUIPMENT MAINTENANCE	SEE SECTION 500.4			
CD44	ILLICIT DISCHARGE/ILLEGAL DUMPING DETECTION AND REPORTING	SEE SECTION 500.4			
CD45	CLEAR WATER DIVERSION AND ENCROACHMENT	SEE SECTION 500.4			
CD46	LIQUID WASTE MANAGEMENT	SEE SECTION 500.4			

APPENDIX N

SWPPP CHECKLIST

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST FOR CONSTRUCTION ACTIVITIES

CONTRACTOR: _____ CONTRACT NO.: _____

GENERAL PERMIT SECTION A: STORM WATER POLLUTION PREVENTION PLAN

CHECK IF ADDRESSED N/A IF NOT APPLICABLE	ITEM	GENERAL PERMIT REF	COMMENTS
	Map Extending 1/4 Mile Showing:	A.5.a	
	construction site		
	surface water bodies (lakes, ponds, spring, and wetlands)		
	wells		
	outline of offsite drainage areas discharging into site		
	general topography		
	discharge location from site		
	Site Map Showing or Describing:	A.5.b	
	location of control practices	(i)	
	areas used to store soils and waste	(ii)	
	areas of cut and fill	(iii)	
	drainage patterns and slopes after construction	(iv)	
	areas of soil disturbances	(v)	
	surface water locations	(vi)	
	areas of potential erosion slated for control practices	(vii)	
	existing and proposed paved areas and buildings	(viii)	
	location of post-construction control practices	(ix)	To be provided by Caltrans
	outline of drainage area for each discharge point	(x)	
	vehicle storage and service area	(xi)	
	areas of existing vegetation	(xii)	
	Narrative Description of the Following:	A.5.c	
	toxic materials stored, disposed, spilled or leaked	(i)	
	practices to minimize contact with storm water	(ii)	
	construction material loading, unloading, and access areas	(iii)	
	preconstruction control practices	(iv)	
	equipment storage, cleaning, and maintenance areas	(v)	
	methods of onsite storage and disposal of materials	(vi)	
	nature of fill material and description of existing soil onsite	(vii)	To be provided by Caltrans
	List of Pollutants Likely to be Present in Storm Water Discharges	A.5.d	
	Size of Construction Site	A.5.e	
	runoff coefficient before and after construction		To be provided by Caltrans
	percentage of impervious surfaces before and after construction		To be provided by Caltrans
	Copy of NOI/WDID	A.5.f	To be provided by Caltrans
	Erosion and Sediment Control	A.6	
	description of soil stabilization practices	a	
	description/illustration of control practices to prevent sediment runoff	b	
	control practices to reduce tracking of sediment onto streets	c	
	control practices to reduce wind erosion	d	
	Non-Storm Water Management	A.7	
	provisions to eliminate/reduce non-storm water discharges		
	Post-Construction Storm Water Management	A.8	To be provided by Caltrans
	description of post-construction storm water management control practices		
	site-specific conditions		
	seasonal conditions		
	operation and maintenance of control practices after completed construction		
	short-term funding		
	long-term funding		
	responsible party		

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) CHECKLIST
FOR CONSTRUCTION ACTIVITIES

CHECK IF ADDRESSED	ITEM	GENERAL PERMIT REFERENCE	COMMENTS
	Waste Management and Disposal waste disposal onsite in compliance with federal, state, and local laws	A.9	
	Maintenance, Inspection, and Repair Procedures procedures to insure that control measures are effective and maintained	A.10	
	Training procedures to insure all inspections are done by trained personnel	A.11	
	List of Contractors and Subcontractors Responsible for SWPPP Implementation	A.12	
	Reference to Other Plans reference, where needed, to other plans required by local, state, or federal agencies	A.13	
	Preparer signature/title, person responsible, date of preparation	A.15	

GENERAL PERMIT SECTION B: MONITORING PROGRAM AND REPORTING REQUIREMENTS			
CHECK IF ADDRESSED	ITEM	GENERAL PERMIT REFERENCE	COMMENTS
	Amendment Log	B.2	
	Monitoring Program Implementation Discussion	B.3 a,b	
	Site Inspection Plan	B.4	
	Compliance Certification Form	B.5	
	Noncompliance Reporting Form	B.6	
	Monitoring Records Retained for at Least Three Years all inspections, compliance certifications, and non-compliance reports	B.7	

CALTRANS REQUIREMENTS			
CHECK IF ADDRESSED	ITEM	STEP-BY-STEP REFERENCE	COMMENTS
	Title Page and Contents	100	
	Certification Page and Amendment Log	200	
	Introduction/Project Description	300	
	Reference Page	400	
	Statement of SWPPP Objective	500.1	
	Amendment Log	600.1	
	Copy of General (Local) Permit	700.1	
	Completed BMP Consideration Worksheet	700.2	
	Completed SWPPP Checklist	700.3	
	Completed Schedule of Values	700.4	

LOCAL PERMIT REQUIREMENTS - INSERT AS APPROPRIATE			
CHECK IF ADDRESSED	ITEM	STEP-BY-STEP REFERENCE	COMMENTS
		800	

APPENDIX O

COST BREAKDOWN
FOR
WATER POLLUTION CONTROL

UNIT DESCRIPTION	UNIT	APPROXIMATE QUANTITY	VALUE	AMOUNT
NON-STORM WATER AND WASTE MANAGEMENT CONTROLS				
CD7(2) DEWATERING	LS	LUMP SUM		
CD9(2) STRUCTURE CONSTRUCTION AND PAINTING	LS	LUMP SUM		
CD10(2) MATERIAL DELIVERY AND STORAGE	LS	LUMP SUM		
CD11(2) MATERIAL USE	LS	LUMP SUM		
CD12(2) SPILL PREVENTION AND CONTROL	LS	LUMP SUM		
CD13(2) SOLID WASTE MANAGEMENT	LS	LUMP SUM		
CD14(2) HAZARDOUS WASTE MANAGEMENT	LS	LUMP SUM		
CD16(2) CONCRETE WASTE MANAGEMENT	LS	LUMP SUM		
CD17(2) SANITARY/SEPTIC WASTE MANAGEMENT	LS	LUMP SUM		
CD18(2) VEHICLE AND EQUIPMENT CLEANING	LS	LUMP SUM		
CD19(2) VEHICLE AND EQUIPMENT FUELING	LS	LUMP SUM		
CD20(2) VEHICLE AND EQUIPMENT MAINTENANCE	LS	LUMP SUM		
CD22(2) SCHEDULING	LS	LUMP SUM		
CD44(2) ILLICIT WASTE MANAGEMENT	LS	LUMP SUM		
CD46(2) LIQUID WASTE MANAGEMENT	LS	LUMP SUM		

UNIT DESCRIPTION	UNIT	APPROXIMATE QUANTITY	VALUE	AMOUNT
SOIL STABILIZATION PRACTICES				
CD22(2) SCHEDULING	LS	LUMP SUM		
CD23(2) PRESERVATION OF EXISTING VEGETATION	LS	LUMP SUM		
SEDIMENT TRACKING CONTROL PRACTICES				
CD22(2) SCHEDULING	LS	LUMP SUM		
CD 29B STABILIZED CONSTRUCTION ROADWAY	EA			

TOTAL